PROCESSOR.

Products, News & Information Data Centers Can Trust.   Since 1979

In This ISSUE

COVER FOCUS
Enterprise IT & The Cloud

Analysts are predicting that cloud computing will reach broad enterprise adoption within the next few years. What do you need to know to prepare?

TECH & TRENDS

Implementing Network Access Control | 1

Despite NAC's technical promise, adoption has been slow for a number of reasons, including fears of over-aggressive security policies locking out users and concerns about implementation costs.

Email: Backup vs. Archiving | 22

When it comes to email backup and archiving, most organizations tend to lump the two into the same category, but they differ in their fundamental business purposes.

Remote Office Disaster Safety | 23

Most analysts agree that traditional approaches to managing remotely located resources using conventional tape-based backup and restore solutions just don't fly in today's environment.

Protecting Portable Storage Devices | 24

For most people, portable storage devices rank at the top of technologies that have improved their lives. But they can be a curse to IT managers.

NEWS

■ **The global economic downturn** and subsequent drop in consumer and corporate spending are hitting chip makers hard ....**page 4**

■ **About 44% of PCs meant** for use in the secondary market end up being reused, and only one in five of are transported from a mature to a developing market, according to research from Gartner ....**page 4**

■ **AT&T plans to eliminate** about 4% of its workforce in an attempt to cut costs ....**page 4**

■ **HP announced that,** because of changes put in motion three years ago, it is now on track to save more than $1 billion per year heading into 2009 ....**page 4**

■ **A survey of 600 New York**, London, and Amsterdam white-collar workers revealed that about 56% of those surveyed feared losing their jobs ....**page 12**

■ **Although shipments for Q3** rose by 4.4% in 2008, global server revenue has decreased by about 5.4%, or $12.7 billion, according to a Gartner study..........**page 24**

■ **Sixty-three lawsuits filed** in a dozen countries are the result of Microsoft's strategy to crack down on pirated copies of WinXP and Microsoft Office............**page 24**

EACH WEEK

The Processor.com home page is updated each week with new articles and hardware news to help you keep current. **Visit www.processor.com today.**

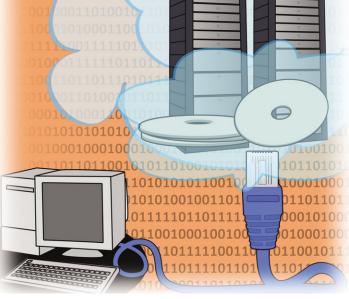
The State Of Cloud Computing

More SMEs Are Exploring The Cloud & Adoption Is Expected To Soar

by Elizabeth Millard
• • •

ONCE A TECHNOLOGY that was adopted only by large enterprises and cutting-edge startups, cloud computing, in which hardware and software are outsourced to Internet service providers, is coming of age

as a potential strategy for mainstream companies of every size. So where does cloud computing stand now in the small to midsized enterprise market?

The Cloud Is Rolling In

Major cloud computing announcements seem to be coming out almost weekly from both major vendors and smaller developers. For example, IBM recently unveiled consulting and implementation services for cloud computing, and Cisco's CTO Padmasree Warrior recently noted at the Web 2.0 Summit that the company sees the cloud as the next evolution in computing. There's also more traction for hosting providers that have launched within the last few years, such as Amazon Web Services, one of the first efforts to bring utility computing to a wider customer base.

Companies can expect that innovation pace and interest to continue, which will lead to greater use within data centers. In fact, research firm Gartner has named cloud computing among technologies that are poised to reach broad enterprise adoption in the next two to five years.

Many analysts note that cloud computing isn't ready for the masses quite yet, so enterprises that haven't explored the strate-gy and technologies already aren't likely to make the move within the next year. But even for those companies, cloud computing will probably become a much more active discussion, and implementation could come within a few years after that.

"There's definitely a transition occurring," says Bert Armijo, senior vice president of sales, marketing, and product management at 3tera (www.3tera.com), maker of a grid operating system that enables utility computing for the deployment and scaling of online applications. "We've been in the market for [more than] two years, and what we've seen over the last year is a change in the type of companies interested in cloud computing. It used to be just Web 2.0 enterprises, but now it's companies of every kind."

Biggest Draws

Like many of the largest data center shifts—virtualization, blade servers, and SaaS, for example—cloud computing is being touted for its potential to deliver big benefits without significantly increasing enterprise costs.

In a recent customer newsletter, Citrix Systems (www.citrix.com) noted that cloud

computing delivers "IT infrastructure as simply as water from the tap or electricity from the socket." Cloud computing makes every element of IT infrastructure available as an on-demand service, the company

---

Key Points

- Cloud computing is expected to grow in adoption within the next five years.
- Drivers for adoption will include the need for higher levels of service at lower costs.
- Benefits of cloud computing include faster development speed and better payment structure.
- SMEs may be more interested in cloud computing in the next three years, particularly when they need to build or expand their data centers.

Implementing Network Access Control

Enhancing Network Security With NAC Requires Careful Planning

by Kurt Marko
• • •

NAC (NETWORK ACCESS CONTROL) invariably comes up in any discussion of promising security technologies designed for this era of mobile users accessing networks remotely over public or wireless networks. The increased transience of employees, who may connect via a VPN from a home office one day and from a public hotspot the next, means that perimeter network security strategies aren't adequate.

Despite NAC's technical promise, adoption has been slow for many reasons, including fears of over-aggressive security policies locking out users with time-sensitive needs, concerns about implementation costs, unease over NAC's immaturity, and uncertainty about the interoperability of NAC products. "The reality of NAC has not always lived up to its potential," says Alan Shimel, chief strategy officer at NAC vendor StillSecure (www.stillsecure.com). "Implementing a NAC solution can be costly, complicated, and expensive, but it does not have to be that way." Experts outline a number of pitfalls to avoid, along with some best practices to follow before starting a NAC implementation.

Where & When To Use NAC

Common business scenarios driving NAC adoption involve frequent guest users on a corporate network and/or a high concentration of remote employees using public Internet or WLANs to access internal systems and applications. Simon Yates, research director at Forrester Research, advises enterprises to "quantify the number of 'risky' users in your environment that could jeopardize data and compliance measures. You have a good business case [for NAC adoption] if more than 5% of your users are contractors, more than 30% of your users come in through public networks, or more than 50% of your users are on the corporate WLAN." Shimel sees strong NAC adoption in education and the military/defense complex. Within the commercial segment, he says midsized (1,000 to 5,000 employees) enterprises show strong interest in NAC deployments, while a Forrester survey found more than 50% of large global enterprises will have NAC implementations within the next 12 months.

NAC Adoption Issues

NAC offers IT security managers a powerful tool to augment existing perimeter

Subscribe Today/Address Change Form

For address change, fill out form below with new information and mail or fax.

PLEASE PRINT

What type of subscription request is this? ☐ New ☐ Renewal ☐ Cancel

Phone: (_____)_____ Fax: (_____) _____

Contact Name: _____

Company Name: _____

Address: _____

City: _____ State: _____ Postal Code: _____

Country: _____

Email: _____ Web Address: _____

1. What is the size of your company (how many employees)?
- ☐ Less than 10
- ☐ 10 to 99
- ☐ 100 to 199
- ☐ 200 to 499
- ☐ 500 to 999
- ☐ 1,000+

2. How often do you purchase computer hardware/software?
- ☐ Weekly
- ☐ Bi-weekly
- ☐ Monthly
- ☐ Quarterly
- ☐ Annually
- ☐ No Involvement

3. What is your annual computer hardware/software purchasing budget?
- ☐ $0 to $9,999
- ☐ $10,000 to $24,999
- ☐ $25,000 to $49,999
- ☐ $50,000 to $99,999
- ☐ $100,000 to $249,999
- ☐ $250,000 to $499,999
- ☐ $500,000 to $999,000
- ☐ $1,000,000+

PROCESSOR.

www.Processor.com

DNF Security JetX portable surveillance systems are designed for use in rugged environments.

Starts at $7,336 for an entry-level system with single display

(800) 947-4742

www.dnfsecurity.com

Portable Surveillance Gets Rugged
DNF Security JetX

Portable surveillance is a powerful way to maintain security in rough environments. Whether it's a construction site in a remote location or the scene of an emergency, portable surveillance provides crucial help when it's needed most. DNF Security's JetX surveillance solution is ideal for mobile, offsite monitoring and recording.

The series of devices includes three models with rugged systems designed to work in severe conditions with no interruption. The units each have one 15-inch or three 17-inch high-resolution LCD displays and an open platform for better compatibility with equipment such as cameras and video management software.

The triple-screen systems support up to 3TB of storage. All JetX systems feature a built-in high-resolution display, integrated keyboard and touchpad, and a rolling carrying bag.

The JetX M-Powered product features a battery-powered system designed to provide long-lasting power in off-road applications and is also available in hybrid editions. The hybrid editions support up to 32 analog and eight IP cameras. Single-display JetX systems feature 2TB of internal storage capacity and a dual-core Xeon processor.

DNF SECURITY
DYNAMIC NETWORK FACTORY

Black Box Elite Managed Power Controller provides advanced power and environmental monitoring capabilities.

Horizontal 120-VAC, Single-Circuit, 8-Outlet, 20-Amp (PSH8-S20-120V): $695

Vertical 120-VAC, Single-Circuit, 20-Outlet, 30-Amp (PSV20-S30-120V): $1,395

(888) 225-6921

www.blackbox.com/go/EMPC

Remotely Monitor, Control & Report Power
Black Box Elite Managed Power Controller

With today's skyrocketing utility bills and the higher energy consumption caused by ever-increasing computing power demands and server density, you can't afford not to keep a close eye on power usage in your data center—particularly after hours.

The Elite™ Managed Power Controller from Black Box provides advanced power monitoring and environmental monitoring capabilities. It not only distributes power to your equipment, it also enables you to *continuously* monitor circuit status, voltage supply, and current. Use it to measure and record kilowatt hour draw and to monitor individual outlet usage as well.

You can even check power and temperature levels remotely to pinpoint peak levels in data centers. Then you can remotely switch power on and off to individual outlets or groups of outlets, enabling you to selectively power down unused equipment to conserve power.

To conserve energy in your data center at certain times of the day, just set up time-delayed or scheduled shutdowns. You can use the controller to turn off unused equipment during off hours and restart in the morning or when needed. It's an inexpensive, simple way to be "green."

With additional features such as message notification, advanced circuit breaker protection, report generation, four levels of access, customizable alarms, and automatic load shedding, the Elite Managed Power Controller from Black Box takes power management to the next level.

BLACK BOX
NETWORK SERVICES

---

iQstor iQ2850 supports up to 15 drives, with scalability up to 240TB.

$33,100 for the iQ2850 with 15TB SATA capacity and unlimited license for snapshot, volume copy, and remote replication

(805) 376-1000

www.iqstor.com

iQstor

Simple & Cost-Effective Storage
iQstor iQ2850 iSCSI

As companies grow and change, their storage needs also change. Storage can be complicated as companies migrate data to new platforms, develop remote data centers, and simply outgrow their old storage solutions. iQstor's iQ2850 storage system is designed to offer companies a scalable, feature-rich storage solution to fit the performance and reliability needs of current applications.

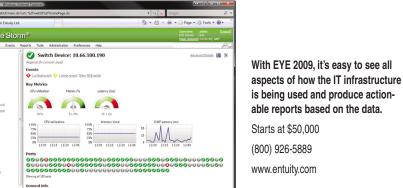Designed to offer all the increased storage utilization, managed data protection, and automated storage provisioning benefits of a SAN, the iQ2850 is an intelligent yet cost-effective all-in-one storage system, giving data center managers the ability to optimize storage quickly and cost-effectively.

Features include the ability to implement a large, tiered IP SAN storage system with support for up to 15TB with 1TB SATA drives, expandable up to 240TB. RAID controllers, power supplies, cooling modules, and disk drives are hot-swappable.

Despite the enterprise-level capabilities of the iQstor iQ2850, it's designed to be a low-cost and simple storage system, ideal for companies that need to consolidate multiple servers without the need for specialized host adapters, switches, and cables. Other benefits include integrated data protection features such as volume manager-based storage virtualization, snapshot, mirroring, remote replication, policy-based storage provisioning, capacity expansion, and remote support. Supported platforms include Microsoft Windows, VMware and Linux.

NETWORKING & VPN

With EYE 2009, it's easy to see all aspects of how the IT infrastructure is being used and produce action-able reports based on the data.

Starts at $50,000

(800) 926-5889

www.entuity.com

Dig Deep Into The Network Infrastructure
Entuity Eye Of The Storm 2009

Entuity's Eye of the Storm (EYE for short) provides IT administrators with detailed information about opera-tional, performance, inven-tory, and connectivity data. In EYE 2009, Entuity has added multiple interface en-hancements and other fea-tures that will help IT staff turn data into actionable knowledge. For example, EYE 2009 offers graphically descriptive and interactive Web components from a single, unified display, which helps IT staff improve management workflows and avoid network support issues that may appear with oversimplified management tools or complex framework applications.

One of key additions in EYE 2009 is improvements to event handling and presenta-tion that allow workers to acknowledge, suppress, or age-out events. Administra-tors can easily account for known outages, such as a devices brought down for maintenance, to prevent un-warranted SLA impact.

EYE 2009 includes a Green IT Perspective that quantifies the IT infrastructure's contri-bution to green IT initiatives. The Green IT Perspective features an interactive dash-board that lets users monitor IT device power consumption; track server, workstation, and network device utilization; and observe the conformance of

devices to shutdown policy. EYE 2009 reports the dollar, kilowatt hour, or C02 ton cost associated with (as well as potential savings from) net-work infrastructures.

With EYE 2009, Entuity intro-duced a new data API that helps improve EYE 2009's built-in Report Center. The new API allows for the cre-ation of custom mashups and in-house applications from the data, and the busi-ness analysis is ideal to or-ganize, produce, and utilize standard reports.

entuity

SERVERS

Librato Load Manager is a workload management solution that monitors and controls server resources.

(408) 588-1716

www.librato.com

Server Consolidation Without Compromise
Librato Load Manager

Librato Load Manager is a workload manage-ment solution that helps customers deliver predictable application performance and opti-mal system resource utilization for x86 plat-forms on physical or virtual servers. Load Manager guarantees server resource utiliza-tion independently across CPU, memory, storage I/O, and network I/O, which enables customers to run more applications on fewer servers without compromising business goals.
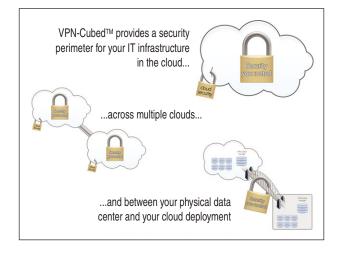
Load Manager allocates system resources via a policy-based scheduler to ensure optimal performance and service level. By maximizing server utilization and delivering application quality of service, Load Manager results in fewer servers, fewer operating systems, less complexity, and guaranteed service level agreements. By dynamically assigning un-used capacity, Load Manager dramatically in-creases server utilization, enabling organizations to get the most out of existing

resources. Load Manager typically uses less than 1% overhead and requires no OS or ap-plication modifications.

Load Manager supports Linux and Windows Server 2003 and 2008. The solution's demand-monitoring capabilities provide an advanced level of capacity planning. In addition to allocat-ing system resources to an application and measuring actual resource consumption (load) over time, Load Manager can also be used to project how much resource an application would have consumed (demand) had it not been limited by its allocation. This ability to de-termine the difference between load and de-mand provides organizations with a powerful tool for planning server capacity.

librato™

NETWORKING & VPN

VPN-Cubed™ provides a security perimeter for your IT infrastructure in the cloud...

...across multiple clouds...

...and between your physical data center and your cloud deployment

CohesiveFT's VPN-Cubed™ enables customer-controlled security in a single cloud, across multiple clouds, and between the physical data center and the cloud.

Ranges from $25,000 to $50,000

(866) 341-3722

www.cohesiveft.com/vpncubed

Your Bridge To Confident Cloud Computing
CohesiveFT VPN-Cubed

Today, clouds are secured by cloud providers. In addition to the cloud vendor's VLAN and in-dividual virtual server firewalls, CohesiveFT VPN-Cubed™ helps customers augment key compliance and governance requirements with a layer of security within their control.

The VPN-Cubed commercial offering enables customer-controlled security in a single cloud, across multiple clouds, and between the physical data center and the cloud.

Using an encrypted VPN (virtual private net-work) specifically developed for use in cloud environments, CohesiveFT helps establish a secure bridge between a company's private infrastructure and the cloud.

With VPN-Cubed, organizations can leverage the cloud for redundancy, cross-cloud failover,

and scalability during critical transitions whether scaling up to grow the business or scaling down to cut costs.

CohesiveFT offered a precursor to the VPN-Cubed offering in production for more than a year via the Open Source VcubeV® project. VPN-Cubed is available now as a packaged service. The basic service is available for use with most operating systems, virtual environ-ments, and third-party cloud offerings. Imple-mentations will vary based on a customer's unique topology.

For more information, contact sales@cohesiveft.com.

cohesiveFT

MESSAGING & TELEPHONY

Multi-Tech Systems MultiVOIP® GSM SIP-to-cellular gateway makes all calls local calls.

MSRP $999

(800) 328-9717

www.multitech.com

International Tariff-Free Cell Calls
Multi-Tech Systems MultiVOIP GSM

Multi-Tech Systems' two-channel MultiVOIP GSM SIP-to-Cellular gateway routes calls from SIP end points on a VoIP network to lo-cations outside the VoIP system through cel-lular network instead of the PSTN line.

By routing voice calls between cellular GSM and SIP-based VoIP networks, organizations see substantial savings for long distance calls. The new gateway makes the whole world a local call and also provides a backup connec-tion to remote VoIP sites in case of external In-ternet failure. A MultiVOIP GSM gateway maximizes an organization's investment in cur-rent telephony equipment and infrastructure.

MultiVOIP GSM units equipped with GSM cellular service are placed at facilities world-wide. Calls can be sent to any of those loca-tions using a VoIP network and sent locally to a cell phone over the GSM network.

The new gateway, Model MVPGSM-2, comes with two ports for communicating over a SIP-to-cellular connection and an Ethernet interface for connecting to an IP network. SIP-IP network ends are connected at desired locations using the Ethernet interfaces. The cellular interface of each MultiVOIP GSM is connected to a GSM network by one or two user-supplied SIM cards. IP PBXes also connected to the same IP net-work are then able to utilize the MultiVOIP GSM to complete calls over the cell networks.

Routing rules decide where calls go. With rout-ing rules, a caller in one country can call a cell phone in another country without incurring toll charges. Calls can originate or terminate from an IP PBX handset, PSTN line, or cell phone.

Multi Tech Systems

News

Chip Makers Hit Hard, Expect Decline In 2009

The global economic downturn and subsequent drop in consumer and corporate spending are hitting chip makers hard, as several manufacturers have lowered forecasts and reported financial drops. STMicroelectronics recently announced that its Q4 outlook for sales and earnings would be lower than expected, and top Taiwanese chip makers TSMC and UMC are also looking into cutting costs in response to lackluster demand for electronic gadgets. Chip giant Intel is also expecting a decline in fourth-quarter sales. Products that analysts expect to be hit hardest in the coming year are mobile phones, wireless devices, and automotive and computer peripherals. The Semiconductor Industry Association is predicting that global semiconductor sales will be down for 2009, which is the first decline in eight years.

Microsoft Loses Market Share To Apple & Mozilla

The market research firm Net Applications released a report that shows Microsoft Windows and Internet Explorer are steadily losing market share to Apple's Mac OS and Mozilla's Firefox Web browser. Microsoft's slice of the operating system pie fell to 89.62% in November, down from 90.46% in October and 91.5% in the beginning of 2008. Mac OS market share, on the other hand, has been steadily climbing, reaching 8.87% in November, up from 8.21% in October and 7.57% in January. The last time Windows' market share was below 90% was with Windows 3.1.The report also shows that Internet Explorer's dominance slipped slightly from 75.47% in January to 69.77% in November. Rival browser Firefox took advantage and grew to 20.78% in November from 16.98% in January. Net Applications cited the U.S. presidential election, the Thanksgiving holiday, and extra weekend days as major reasons for Firefox's November gains, as Firefox has a larger residential usage base than corporate. This marks the first time Firefox's market share exceeded 20% for a full month. Net Applications expects Firefox's share to remain above 20% this month, as well. On the upside for Microsoft, Windows Vista's market share nearly doubled, from 11.97% in January to 20.45% in November.

Sanyo Acquisition Talks Stalled

Negotiations reportedly hit a rough patch in late November between Panasonic and Sanyo due to disagreements over the price-per-share offer Panasonic was making in its takeover bid of Sanyo. The takeover bid was believed to be in the neighborhood of $9 billion. The rough spot is believed to be temporary, however, as bid negotiations are still taking place between Panasonic and Goldman Sachs, which reportedly controls 70% of Sanyo, the world's largest maker of rechargeable batteries. Panasonic, the world's

leading manufacturer of consumer electronics, announced in late November that it cut its net profit forecast for fiscal year 2008 by almost 90% from about $3.3 billion to $316 million due to slow sales and competitive pricing discounts.

More Than Half Of Retired PCs Not Being Reused

About 44% of PCs meant for use in the secondary market end up being reused, and only one in five of those PCs are transported from a mature to a developing market, according to research from Gartner. The report cites export tariffs, transportation costs, and a drop in the average selling price of new systems as three of the biggest factors prohibiting greater use of secondary market systems. Meike Escherich, a Gartner analyst based in the UK, says the secondary market is highly fragmented and competitive and called for legislation to be more general, "focusing on the environment, privacy, and how a company must take care of a person's nonpublic information." Escherich says demand for secondary PCs will likely grow in emerging areas such as Eastern Europe and the Middle East.

Intel, Micron Produce 34nm Flash Memory

IM Flash Technologies, a joint venture between Micron Technology and Intel, has begun mass production of the first 34nm, 32Gb multilevel cell NAND flash memory device. The companies say production is ahead of schedule and that they expect one of their manufacturing facilities to have more than 50% of its capacity moved to 34nm by the end of this year. The new chips are manufactured on 300mm wafers and are smaller than a thumbnail. They will eventually be used in solid-state drives and some consumer electronics.

Cyber Attacks Increasingly Target United States

The United States' private sector, civilian U.S. government agency, and unclassified U.S. military and intelligence agency networks increasingly are experiencing cyber intrusions and attacks, and China is one of the sources for those attacks, according to the annual report from the U.S.-China Economic and Security Review Commission. The group also says that the United States' dependence on cyber space leaves both the U.S. government and economy at risk and that China will likely take advantage of that reliance. The commission made several recommendations, including cooperating with China to strengthen export and border control programs.

AT&T To Cut 12,000 Jobs

The No. 1 phone company in the U.S., AT&T, plans to eliminate about 4% of its workforce in an attempt to cut costs. AT&T will eliminate the 12,000 jobs over the rest of this year and into 2009 and will take a charge of about $600 million in this year's fourth quarter for severance. The carrier also plans to cut its 2009 capital spending from 2008's levels, though details on spending won't be available until later next month. While AT&T is cutting its overall workforce, it said in a statement that it plans to add jobs in areas such as wireless, video, and broadband to meet customer demand.

Nokia Predicts Drop In Handset Market

If Nokia's predictions are correct, the global mobile phone industry's sales volume will fall by at least 5% next year due to consumers' reduction in spending, a sales downturn many analysts were already expecting. Given the slowing environment, Nokia is working to reduce costs appropriately. Nokia aims to increase its cell phone market share in 2009, though the company lowered its forecast for the broader 2009 telecom equipment market, saying it would fall in Euro terms 5% or more. Nokia doesn't expect smartphone sales to be greatly affected but believes smaller rivals are likely to suffer the most from the downturn.

Apple Removes Antivirus Page

Apple recently removed a help document from its online support page that advised Mac-owning customers to download and use multiple antivirus programs to help keep their computers secure. The help document came down after Apple received an abundance of media attention claiming the page contradicted Apple's marketing claims that the Mac OS X is protected from attacks and malware right out of the box. Some sources cite the move as a preventive measure by Apple to avoid being sued for overstating the security of its products; Apple has recently dealt with legal issues regarding the portrayal of its products, namely the network performance of the iPhone 3G.

Adobe Cuts 600 Jobs

Adobe announced that it will cut 600 jobs and lower its revenue expectations for the fourth quarter. At the end of September, Adobe employed about 7,623 people; the cuts will amount to about 8% of Adobe's total workforce. Due to lower-than-expected sales of its new Creative Suite 4 package, which includes programs such as Photoshop and Dreamweaver,

Adobe lowered its fourth quarter revenue prediction from about $955 million to about $915 million. After the announcement, Adobe's stock price fell 7% to $20.95 per share.

HP Forecasts $1 Billion In IT Savings Per Year

HP announced recently that, because of changes put in motion three years ago, it is now on track to save more than $1 billion per year heading into 2009. In July 2005, HP's new Executive Vice President and CIO Randy Mott put the company's IT department on a diet, and now, the cost-cutting strategy, which still allowed HP to reap $25 billion of additional revenue in the three-year period, seems to be paying off. Thanks to virtualization, consolidation, and energy efficiency initiatives, HP is now poised to save more than $1 billion per year in IT costs compared with fiscal year 2005 levels. The company also expects to boost its data centers' processing power by 250%, decrease the number of servers by 40%, and reduce energy consumption by 60%, while simultaneously reducing networking costs by 50% and tripling bandwidth.

WATCH THE STOCKS

This information provides a quick glimpse of current and historical stock prices and trends for 14 major companies in the technology market.

Company	Symbol	Year Ago	Nov. 26 $	Dec. 5 $	% change from previous week
AMD	AMD	$8.91	$2.13	$2.13	Uchgd.
Computer Associates	CA	$25.60	$16.08	$16.06	▼ 0.12%
Cisco Systems	CSCO	$27.48	$16.39	$15.94	▼ 2.75%
Dell	DELL	$24.31	$11.05	$10.71	▼ 3.08%
Google	GOOG	$698.51	$292.09	$283.99	▼ 2.77%
HP	HPQ	$51.66	$35.21	$33.53	▼ 4.77%
IBM	IBM	$108.16	$81.67	$80.59	▼ 1.32%
Intel	INTC	$27.22	$13.97	$13.29	▼ 4.87%
McAfee	MFE	$38.57	$30.41	$28.10	▼ 7.6%
Microsoft	MSFT	$34.15	$20.49	$19.87	▼ 3.03%
Oracle	ORCL	$21.22	$16.14	$16.32	▲ 1.12%
Red Hat Software	RHT	$20.03	$9.48	$12.18	▲ 28.48%
Sun Microsystems	JAVA	$20.55	$3.11	$3.49	▲ 12.22%
Symantec	SYMC	$17.90	$12.17	$12.04	▼ 1.07%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions.

PRODUCTS *AT WORK*

An Easy-To-Follow Email Trail

RPost Registered E-mail Offers Insurance Broker Proof Of Emails Sent & Received

by Jean Thilmany

• • •

NOTHING GETS YOUR ATTENTION quite like a certified letter. Maybe it's because you must sign for a certified letter to verify you've received it. And that means it contains information important enough to protect.

As an insurance provider, Randy Frankel, who owns Frankel & Associates Insurance Services in Los Angeles, has sent many certified letters to clients and underwriters. But about five years ago, Frankel began wondering if email could work in the same manner. Could he, in essence, send a certified email?

He found his answer: Yes.

For the past five years, Frankel has been sending registered emails using tools from RPost (www.rpost.com) of Los Angeles. The company's Registered E-mail provides legal and verifiable evidence of email content and includes the time the email was sent and received. It also legally protects the sender when the delivery, content, or time of an email is disputed.

Layer Of Protection

Many senders think sending an email is similar to sending a letter through the post office. And in the case of chatty emails, they're pretty much right. But for emails that contain critical information of the type Frankel sends as part of his business, the additional layer of protection that registered email provides is required, he says.

With respect to standard email, the time appearing on the sent or received email doesn't act as legal proof the email was sent or received, as its text format can be easily altered. Registered E-mail gives Frankel the proof he needs that the email was sent and received, he says. With RPost, the email is automatically encrypted and cannot be changed by the recipient.

"If I send an email to an insurance company and say please bind coverage on an account, I need to make sure they got my email and are processing it," Frankel says. "So I was looking for a way to send an email and confirm it got there."

The RPost service also allows Frankel to follow a registered email's progress. The service sends him an alert when his email has landed in the recipient's inbox and again when the recipient opens it. The recipient needs to do nothing. By opening the email, the recipient essentially acknowledges she's received it, much like signing for a certified letter.

"I sort of compare it to the old way of doing things, but this is high-tech," Frankel says. "It's like that email was hand-delivered to a person and he signed for it."

Frankel now uses the service for all critical communication with his clients and with insurance underwriters. "My main concern, when I want to send a registered email, is when I'm binding coverage, or adding a building to a policy, or endorsing a policy, or changing an address," he says. "I can now prove I did it, and that's what I wanted."

When Frankel binds coverage, he's verifying with an underwriter the insurance policy has been written, then sending proof of coverage to those he's insured. "If you want to cover your car, you typically won't drive it until you see proof of coverage," Frankel says. "If I send you a registered email proving you have coverage, I know I sent it and you got it."

Extra Layer Of Protection

Though Frankel carries the professional liability coverage required for insurance providers, he considers RPost an extra layer of legal protection, as the registered email can be legally called upon when insurance coverage is contested.

"It's a way to prove in court I sent something. For insurance, that's important," Frankel says. "If I bind coverage at midnight and a fire happens one minute after midnight, I can prove coverage."

In fact, Frankel recently called upon the service to demonstrate an important email had been received and opened. He'd sent a registered email to an insurance underwriter requesting a building be added to a pre-existing policy. The RPost service confirmed the underwriter had opened the email.

"But a week later I followed up, asking 'how come I don't have a bill for adding the building?'" Frankel says. The recipient had no recollection of the email. "That underwriter was overworked and likely opened it and took a quick look and thought he'd get back to me and he never did," Frankel says. "But he had opened it. So I forwarded the email that I'd received back from RPost that said he opened it.

"That situation provided a paper trail and there was no loss, thank God, but if there had been I'd have had proof of requesting coverage," he says.

The application also tracks registered emails sent and received—a boon for Frankel, who receives a list of his sent emails from RPost each month and uses them for cross-reference.

He pays a small fee of about 40 cents each time he sends a registered email, which he compares to the price of a stamp.

Easy Implementation

Implementation was easy, he adds. "They send you an email, you click on a button, and, boom, it's installed," he says. "Then you go to Outlook and the RPost button has popped up next to the Send button. From then on, you can send regular email or a registered email."

The sender can allow the recipient to know the email she's received is registered. Or, the sender can hide the registered mark.

Of course Frankel still sends regular, nonregistered emails. "If I deem it critical, I press registered email," he says. "It's the cost of sending a regular letter through the mail. It's worth it for me." ▣

> **RPost's Registered E-mail provides legal and verifiable evidence of email content; includes the time the email was sent and received; and legally protects the sender when the delivery, content, or time of an email is disputed.**

Top Layer IPS 5500 E-Series offers defense-in-depth protection with new shunning features for blocking traffic.

Starts at $15,000

(508) 870-1300

www.toplayer.com

Shunning Botnets & Rate-Based Attacks
Top Layer IPS 5500 E-Series

Fighting malware such as botnets and other rate-based attacks is a top priority for every company. Top Layer Security offers its latest solution for warding off attacks with the Top Layer IPS 5500 E-Series, a family of products that offer defense-in-depth protection.

The IPS 5500 E-Series has new shunning features designed to provide companies with techniques to support the device's automated attack defense. These include the ability to quickly temporarily or permanently reject traffic from IP addresses suspected of originating or being related to an attack. The new features are designed to help companies interactively identify current attackers and then shun attack traffic.

The IPS 5500 E-Series also includes a new user interface with dashboards designed to allow Security Operation Center personnel to quickly switch between "quiet-time" monitoring and "under siege" incident response. Other new features include attack source identification, malicious IP address shunning, and additional router protection.

With malicious IP address shunning, users can set time periods for how long each address should be shunned and manually unshun addresses that are determined safe. With additional router protection, users can export a list of IP addresses being shunned so that they can be imported into a router for blocking by the router. The new features are included in version 5.2 of the IPS 5500 E-Series software.

Data Center Cooling Solution
Simplex Isolation Systems AirBlock

Data centers must be kept cool to achieve maximum operating efficiency and ensure against disastrous malfunction, computer crashes, and loss of data. Unwanted mixing of warm air and cold air is one of the key factors contributing to energy waste.

That's why data centers need a way to reduce data center cooling costs by directing cold air where it is needed most—through the computer racks. AirBlock curtains and strip doors from Simplex separate cold air and warm air aisles, maximizing the dynamics of airflow to cool your data center. A system can pay for itself in months.

- Save energy on both air conditioning and fan systems—15% and 67%, respectively, according to a study by the Lawrence Berkeley National Laboratory.
- The AirBlock product line includes transparent curtains, strip doors, panels, and patented hardware, letting you create a solution specific to your needs.
- Specially formulated vinyls are low-outgassing and antistatic and meet ASTM and NFPA fire retardancy requirements.
- Hardware is also designed so curtains fall away in the case of fire, allowing fire sprinklers full operating range.

Simplex also manufactures hardwall systems with rigid, transparent panels, offering even more containment and greater ability to direct cool air. All Simplex products and systems are designed to meet ASTM and NFPA fire retardancy requirements.

Simplex Isolation Systems AirBlock curtains and strip doors separate cold and warm air aisles, maximizing airflow.

(800) 854-7951
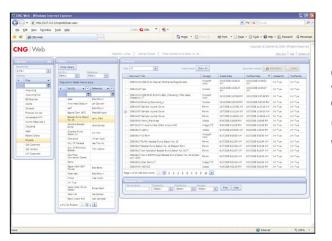
www.SimplexIsolationSystems.com

Cabinet NG's CNG-WEB provides instant and secure access to clients files.

(256) 258-0460

www.cabinetng.com

Access Essential Business Documents
Cabinet NG's CNG-WEB

Cabinet NG's CNG-WEB lets users easily access essential business documents anywhere, anytime using a standard Web browser. This extends the security of CNG-SAFE, Cabinet NG's Shared Access Filing Environment, to let users safely access and search cabinets and folders and view and print documents from virtually any location.

CNG-WEB is an easy-to-use and economical online extension of a small enterprise's document management system. The system automatically enforces security and controls access rights for all users. Files and folders are only accessible by authorized users.
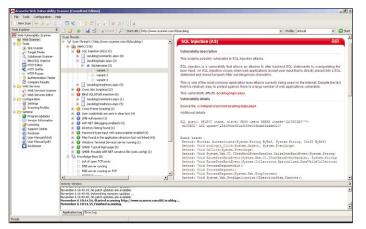
CNG-SAFE's automated document management platform gives businesses all they need for electronic document management in a single package—advanced data protection, state-of-the-art user interface, and the ability to integrate with most third-party applications.

Small enterprises can replace paper and boost accessibility and insight with automated electronic workflows that streamline internal processes, making filing, locating, and sharing documents simple, seamless, and secure.

CNG's user-friendly document management solutions streamline user tasks, delivering gains in office productivity and bottom-line savings. By creating a secure electronic filing environment, CNG's products move manual paper-based procedures into efficient automated workflow processes. CNG integrates document management with popular business applications, creating a central repository of business information that powers more effective business processes.

Acunetix Web Vulnerability Scanner v6.0 performs automated scans and displays vulnerabilities found.

Small Business edition starts at $1,445; free version available

(888) 593-5285

www.acunetix.com

Is Your Web Site Hackable?
Acunetix Web Vulnerability Scanner

Web site security is possibly today's most overlooked aspect of securing the enterprise and should be a priority in any organization. Hackers are increasingly concentrating their efforts on Web-based applications, as insecure Web applications provide easy access to back-end corporate databases and also allow hackers to perform illegal activities using the attacked site.

Acunetix Web Vulnerability Scanner automatically checks Web applications for known Web vulnerabilities, including SQL injection, XSS (cross-site scripting), and others. Concise reports identify where Web applications need to be fixed, enabling organizations to protect themselves from impending hacker attacks.

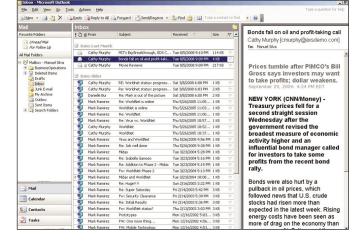Acunetix has a sophisticated vulnerability detection engine that comes with the pioneering AcuSensor Technology. This is a new security technology that allows developers to identify more vulnerabilities than with a traditional Web Application Scanner, while generating fewer false positives. In addition, it indicates exactly where the vulnerability is within the code and reports debug information. It also locates CRLF injection, code execution, directory traversal, file inclusion, and authentication vulnerabilities.

Acunetix Web Vulnerability Scanner is available in three versions: A Small Business version for one nominated Web site; an Enterprise version to allow for scanning of an unlimited number of Web sites; and a Consultant version, which allows users to perform penetration tests for third parties.

AXS-One Dynamic Data Migrator is designed to make email, calendar, and email contact migration more efficient.

(800) 828-7660

www.axsone.com

Email & Data Migration Get A Shot In The Arm
AXS-One Dynamic Data Migrator

Data migration from one email platform to another can be an unwieldy process, requiring a great deal of planning and preparation, not to mention an abundance of resources. For example, different platforms allow different inbox sizes, creating a potential nightmare for employees who want to retain all their old emails after conversion and migration is complete.
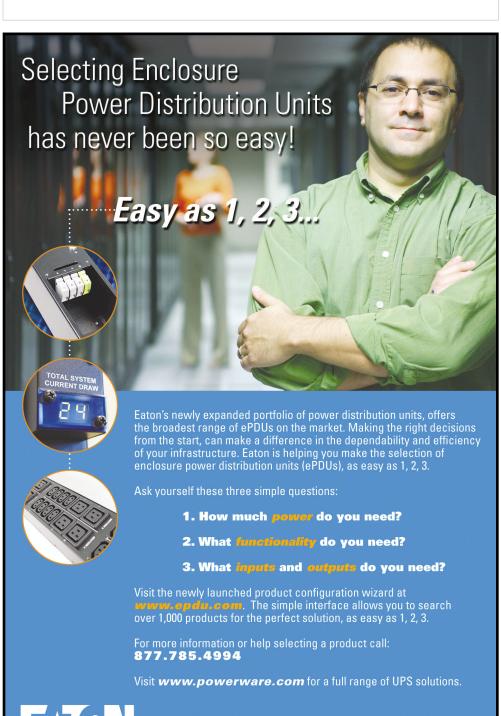
AXS-One's Dynamic Data Migrator application offers a policy-based method of migration designed to solve this problem. Dynamic Data Migrator lets users retain their recent emails after migration, but it also creates a way for people to retrieve older emails instantly without requiring administrators to keep them all on local servers.

This helps relieve pressure on IT departments to create and maintain additional storage after the migration. Emails that are more than two years old are available to users via a Web-based portal. Overall, Dynamic Data Migrator helps users maintain access to information necessary for doing business.

AXS-One has added new features to Dynamic Data Migrator: the company partnered with CASAHL and Unify to offer a best-of-breed approach to migrating calendars, contacts, and applications in addition to email. The partnership is also designed to provide effective co-existence with Lotus environments. The new enhancements will be available in Q1 2009.

Enhanced Backup Options For SMEs
Yosemite Backup 8.7

No company doubts the importance of backing up data. It's a crucial aspect of ensuring that a company's data is kept safe. Yosemite Technologies' Yosemite Backup application has been offering a backup solution for companies since the early 1990s.

Yosemite Backup is designed to be simple to purchase and upgrade and supports a range of platforms, including the latest Windows OSes, NetWare, and Linux. Another mainstay feature is the ability for companies to purchase a single backup server to

facilitate their backup needs instead of needing to acquire several.

The latest version of the application, Yosemite Backup 8.7, includes support for Windows Hyper-V and VMware ESX. It also supports Windows PE 2.1 for Vista and Windows Server 2008 disaster recovery.

Yosemite Backup 8.7 is designed to enable current customers to seamlessly update their environments while allowing new customers to easily add the applica-

tion. Users can implement push technology to update their Master Backup Server while automatically having updates installed on all deployed backup clients. Also included is support for SAN and shared devices, as well as Windows services, including Microsoft DFS, Active Directory Lightweight Directory Services, SharePoint 3.0 SP1, and Exchange 2007 SP1.

The Yosemite Backup software development kit version 1.0, which provides access to the API on which Yosemite Backup is based, is available on approval.

Yosemite Technologies Backup 8.7 allows companies to purchase a single backup server to facilitate all their backup needs.

- Yosemite Backup Standard Master Server with Yosemite Care for Windows, Linux, and NetWare: $811
- Yosemite Backup Windows Unlimited with Yosemite Care: $1,249
- Yosemite Backup Universal Unlimited for Windows, Linux, and NetWare with Yosemite Care: $2,499

(408) 737-3311

www.yosemitetech.com

Reduce Windows Configuration Complexity
New Boundary Technologies Prism Suite 9.0
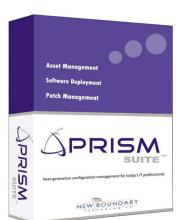
New Boundary Technologies Prism Suite 9.0 offers robust, safe, and seamless Windows system management for any location.

Starts at $61.20 per seat for 100 seats

(800) 747-4487

www.newboundary.com
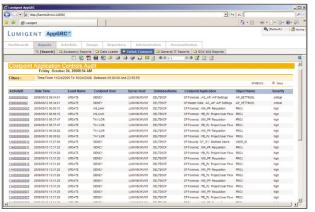
Every Windows administrator is looking for new ways to make Windows configuration more manageable and efficient. All too often, however, the tools and programs designed to simplify the Windows configuration process only add complexity and headaches.

New Boundary Technologies' Prism Suite 9.0 helps reduce the complications associated with Windows configuration. New Windows configuration management features allow for se-

cure, Internet-based administration of mobile workforces and remote locations, resulting in better functionality and performance. In addition, Prism Suite 9.0 has been designed to spread out the deployment of software and configuration responsibilities to enhance performance and conserve bandwidth.

Prism Suite 9.0 also offers a client/server architecture and modular design to automate and simplify processes inside IT departments or via

a managed service provider or software as a service models.

Corporate IT departments will benefit from the inclusion of effective, dependable packaging of 64-bit software programs, allowing large, 64-bit software programs to be deployed faster. Prism Suite 9.0 also includes added support for WMI (Windows Management Instrumentation), so Windows administrators can be more accommodating when grouping systems for management tasks.
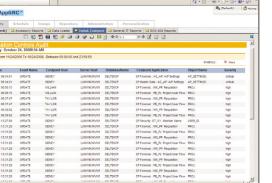

The Lumigent AppGRC suite helps companies drive down compliance costs while improving governance-driven productivity and profitability.

Prices range from $42,000 to $360,000, depending on complexity of monitored application and size of the customer

(866) 586-4436

www.lumigent.com

Drive Down Costs, Drive Up Productivity & Profitability
Lumigent AppGRC

Meeting GRC (governance, risk, and compliance) requirements for primary business applications is important for companies. Lumigent's AppGRC suite of applications is designed to help companies drive down compliance costs while improving governance-driven productivity and profitability.
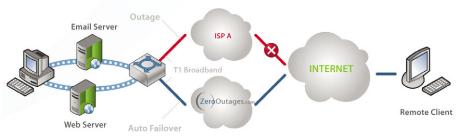
Elements of the suite include AppGRC for Deltek Costpoint and AppGRC for PeopleSoft Financials, with more applications to follow. Using automated data baselining and continuous monitoring of data fields at the database layer and their controls, the applications are designed to strengthen the integrity of critical business operations and reporting for applications that use IBM DB2, Microsoft SQL Server, Oracle, or Sybase databases. The suite enables customers to watch data, identifying the who, what, when, and before/after values. When a change exceeds AppGRC's set values, AppGRC issues the company an alert.

AppGRC is designed to save companies thousands of hours of controls tests by using reports and templates to help companies pass audits. The approach includes discovery, control, and application data and process visibility. AppGRC discovers where sensitive data is stored and how it correlates to processes and applications, and then assesses internal control objectives and how they're being met.

AppGRC monitors operations to reduce the need for evaluations and collects details about data changes. If anything is outside set policies, AppGRC compiles and delivers the results to confirm or deny the effectiveness. AppGRC's full compliance view identifies all data and its controls that have not changed over time, while identifying all data and controls that have changed, with before and after images to minimize audit preparation and simplify presentation.

ZeroOutages can double the speed of your data center's Internet connectivity and guarantee 99.999% uptime.

10Mbps Web bonding for $499/month
3Mbps wireless failover for $149/month

(949) 477-6100

www.ZeroOutages.com/Processor

Faster Download Speeds + Peace Of Mind
XRoads Networks: ZeroOutages.com

With today's fast-paced, always-on business climate, enterprises are looking for increased bandwidth and guaranteed Internet uptime. That's why XRoads Networks, the leading broadband aggregation service provider, created ZeroOutages.

ZeroOutages delivers turnkey simplicity for enterprises looking for more bandwidth and network redundancy. The solution includes everything required for a transparent installation, including:

- A secondary broadband connection, ranging between 768Kbps and 10Mbps, which is combined with your existing primary Internet connection.
- Transparent switching technology that automatically detects any outage and reroutes traffic on the fly.
- And our dedicated network operations center, which monitors your links 24/7 and provides daily network usage and SLA reports.

All features are bundled in a single, easy-to-deploy service, which enables end users to improve their productivity and avoid unnecessary downtime.

The ZeroOutages solution is designed to provide 99.999% uptime for SAP, Oracle, CRM, and other mission-critical server applications for remote and branch offices.

The service is perfect for both data centers and the remote and branch offices that depend on them. If your end users depend on being able to connect to your data center, you need this service.

www.ZeroOutages.com/Processor
Use this link to see a special offer.

What's In The Cloud?

A Look At Benefits, Services & Applications Available Through Cloud Computing

by Sixto Ortiz Jr.

• • •

IN THE QUEST TO compete, businesses are frequently looking for the edge that will level the playing field and allow even the smallest company to effectively compete with midsized or even enterprise-class organizations. Technology is one way to do this, but the problem for smaller companies is the hefty price tag that often accompanies cutting-edge technology.

Enter cloud computing. By using enterprise-level applications provided as pay-as-you-go services, companies large and small can get their hands quickly on the technology they need to compete, with minimal upfront capital expense. Read on to learn more about cloud computing and what's available in the cloud today.

Understanding The Cloud

Definitions of cloud computing vary depending on who is providing the answer. Russ Castronovo, cloud evangelist at Sun Microsystems (www.sun.com), says cloud computing is a style of computing in which IT-related capabilities are provided as a service, allowing users to access technology-related services from the Internet without the need to have knowledge of, expertise with, or control over the technology infrastructure that supports these capabilities.

Cloud computing is the evolution of computing infrastructure, platforms, and software services into utility services, much like telephones or electricity, says Geva Perry, chief marketing officer at GigaSpaces (www.gigaspaces.com). "These computing services are delivered in a way that we can easily access them, use them when we need them, and only pay for what we use—all this instead of owning, installing, integrating, managing, maintaining, and running these resources ourselves," adds Perry.

Cloud computing has much appeal for companies that want to take advantage of cutting-edge technology but don't want to go through the expense and time involved in configuring enterprise-class applications and their supporting infrastructures in-house.

Jim Szafranski, vice president of products and marketing at Fiberlink Communications (www.fiberlink.com), says cloud computing can save enterprises money, especially during the initial phases of IT projects when substantial capital investment is required. "With cloud computing," he adds, "you just pay for the capacity you need without having to make a big cash outlay out front."

Jeremy Ford, senior manager for the office of the CTO at Dell (www.dell.com), says cloud computing allows users to pay for and use services, storage, and other resources they need, when they need them. So customers can be billed in ways related to their usage, such as server utilization, processing power used, or bandwidth consumed.

Today's Cloud-Delivered Services

Many applications are offered via cloud computing today. Rebecca Lawson, director of HP's service management portfolio (www.hp.com), says applications such as sales force automation and supply chain management, which were previously out of reach for many SMEs, are now available via cloud computing.

Another example of applications available via the cloud includes the category of software as a service for communications, says Scott Morris, general manager of Axispoint (www.axispoint.com). Examples of these types of applications include email, chat, and online meeting/collaboration applications.

Jonathan Bryce, co-founder of Mosso, Rackspace's cloud computing division (www.mosso.com), says during the past two years, there have been a lot of advances in delivering hosted infrastructure (services, network capacity) and hosted platforms (full operating environments where you can run your code).

And, adds Bryce, there are lots of applications and services that have standardized over time. For example, email does the same thing—sends and receives messages, handles calendaring, maintains address books—no matter where it is running, so SMEs can do just as well with a cloud-based email service as they can with an internal service.

Eran Livne, product manager at Radware (www.radware.com), says that as more cloud-based services are developed, small organizations may increasingly be able to offload the task of managing a data center locally by offloading hosting applications to several cloud-based service providers. "Small businesses usually do not require tailor-made applications to support their business and can therefore use off-the-shelf applications as offered by these cloud-based service providers," Livne adds.

Cloud Computing's Future

Dennis Quan, director of development for autonomic computing at IBM's Software Group (www.ibm.com), says cloud computing isn't a brand-new technology but has been an ongoing evolution with roots in distributed, grid, and utility computing models.

> ### Key Points
>
> - Cloud computing hides applications' complexity and can help companies avoid large capital expenditures.
> - Companies only pay for the technology that they use, which can help defray substantial operating expenses.
> - The number of applications delivered via the cloud will increase as bandwidth, processing, and Web 2.0 programming challenges are resolved.

One trend Quan sees in the next few years is the increasing use of enterprise clouds that take advantage of both public and private clouds. Enterprise customers, adds Quan, are wary of public clouds due to issues with security, privacy, regulatory compliance, and standards.

Private clouds are client-owned and -managed environments in which a company can re-engineer existing resources and make them act more like the Internet but with the security that comes with a cloud that sits physically behind a firewall, providing controlled access and security, adds Quan.

Another key development, says Haydar Haba, founder of IntelePeer (www.intelepeer.com), is the emergence of CaaS (communications as a service). "Using the hosted cloud computing model, Web service providers and software vendors can build next-generation voice and rich media services on a hosted CaaS platform, letting them offer new high-value services and features without incurring the high capital and management costs necessary to drive these services on their own."

Cloud computing is a natural evolution as computing slowly but surely marches on in its transformation into a utility-like model where technological complexity is hidden from end users of enterprise-class applications. SMEs can take advantage of cloud computing and make use of applications that, if implemented in a standalone manner, would require large expenditures and ongoing operating expenses. The choices for SMEs will only increase as more and more applications are ported into the cloud. ⊓

Public Cloud Computing

Even though there are potential concerns with security, privacy, and regulatory compliance, some cloud computing environments are delivered as public services that any company can use. Two examples of public cloud computing systems include Amazon's Web Services (aws.amazon.com) and Google's App Engine (code.google.com/appengine/docs/whatisgoogleappengine.html).

Amazon's Web Services features a plethora of applications, from the Amazon SimpleDB (a Web service for running queries on structured data in real time) to Amazon CloudFront (Web service for content delivery) to Amazon Simple Storage Service (a data storage service).

Google's App Engine is a bit more open-ended; via this service, Google allows developers to run Web applications coded using the company's Python-based App Engine on its infrastructure. In the future, Google is promising the support for other programming languages.

KACE Survey Determines Virtualization Trends

To learn more about trends in the adoption of virtualization technology in medium-sized enterprises, systems management appliance company KACE recently released the results of a study conducted among IT professionals in October.

The study revealed that 76% of midsized enterprises have deployed some type of virtualization technology, with an additional 9% stating plans to incorporate some aspect of virtualization technology within the next 12 months. KACE (www.kace.com) co-founder and CEO Rob Meinhardt states that many people may think of virtualization as an enterprise-only endeavor. However, "the mid-market is as popular or as exciting of a market as the enterprise," he notes. "It may be surprising to readers to find out that 85% of midsized enterprises have already begun the process of deploying virtualization technology." For those companies that have already implemented virtualization technology, 68% are utilizing server virtualization. The most common virtualization technology desired by those who plan to deploy within the next year is application virtualization and desktop virtualization.

KACE's study also focused on companies that have not arranged for virtualization in their enterprises. The study found that of those companies without virtualization, 37% cited lack of expertise as the defining reason. Additionally, 35% of companies reported that product cost restrained them from deploying virtualization, while about 32% stated that they had no time to evaluate or implement virtualization technology. Meinhardt has a few ideas as to why some companies haven't made the virtualization switch. "One of the things we've noted in the midsized enterprises is that many of our customers are IT professionals that wear many hats. That's why you get some feedback that companies just don't have that expertise. Peers of these midsized companies are already deploying this technology with pretty good success; 55% of these customers are citing that they are getting cost savings in less than a year," he notes.

Personal Benefits

In the study, participants were asked questions about the benefits that virtualization has had on them personally. About 62% of managers and executives stated that they were able to do more with their budgets, whereas 50% of front-line IT professionals reported the same. Other personal benefits cited were that virtual systems are less stressful and that they had to manage fewer "firefights."

Meinhardt comments on the study's overall significance for midsized enterprises, saying, "Peers of these midsized companies are already deploying this technology with pretty good success, and 55% of these customers are citing that they are getting cost savings in less than a year. For the midsized companies, there's an indication here that there's a cost and efficiency advantage to jumping in with two feet into the virtual world."

by Kris Glaser

The State Of Cloud Computing

claims, including operating systems, applications, storage, servers, appliances, and workflow management.

The major benefit with that kind of breadth is that it turns computing into a kind of industrialized model, with large service providers offering their services in high volume at low cost so that smaller companies can achieve the same cost benefits that larger companies have always seen.

Forrester analyst Ted Schadler notes that there are three key advantages, particularly for messaging and collaboration. The first is speed, as the technology allows companies to launch strategies such as employee portals much faster than traditional in-house efforts.

Secondly, Schadler adds, companies can depend on cloud computing firms to do IT tasks such as network support and monitoring, leaving IT and data center managers to focus instead on high-level strategy and planning rather than mundane firefighting.

And, finally, there's the payment plan structure of cloud computing, which usually allows companies to pay according to the number of users every month. For companies that have large numbers of seasonal workers, this can be a boon, and it's also advantageous because companies can cancel a contract without much notice, Schadler states.

In his recent report, Schadler writes: "[I]n capital-constrained times, the upfront cash outlay and financial risk of on-premise solutions can prevent many projects from being funded. Fortunately, cloud-based collaboration service providers offer a cash-flow-friendly alternative to on-premise installation for projects including email overhauls, wiki workspaces, and Web conferencing."

SME-Ready?

Although analysts and vendors are eager to articulate the benefits of cloud comput-

ing, and predictions of wide adoption are being advanced, it's likely that right now, most companies will not be diving into the cloud computing arena quite yet.

"Despite all the talk, cloud computing is still in its infancy," says Armijo. "There are really just a handful of providers, and the majority of them are still small. So far, we're just finding out what the technology is capable of."

During the next year, Armijo anticipates that there will be more exploration by customers and vendors into what types of service cloud computing can really provide and how payment structures can be tweaked to be even more beneficial.

"For cloud computing to be successful, for it to be ubiquitous, we need to work on how clouds extend into corporate data centers," he says. "We need to focus on how they can be used [in] a way to strategically move resources back and forth on demand."

In the meantime, SMEs should keep up on the latest developments and look closely at the cloud when the time comes to build a new data center, believes Jian Zhen, senior director of product management at LogLogic (www.loglogic.com), a log management firm.

Evolution Of Hosting

According to Forrester Research, cloud computing is the natural next step in hosting. The research firm sees this progression:

- **ISP 1.0:** provided access to the Internet via dial-up, ISDN, T1, T3.
- **ISP 2.0:** access to servers at the Internet access point.
- **Colo (ISP 3.0):** racks for your equipment at the Internet access point.
- **ASP (ISP 4.0):** hosted applications on servers at the Internet access point.
- **Cloud (ISP 5.0):** dynamic, Internet-optimized infrastructure for hosting applications.

"Small companies will focus on building their business, and SMEs often don't have the resources to build new data centers," he says. "Because of that, we think that within the next three years, there will be more public clouds and more SMEs willing to use them." P

Implementing Network Access Control

defenses, according to Robert Whiteley, principal analyst at Forrester Research, specifically "the ability to run compliance checks, segment network connectivity, and quarantine users based on policy." He says, "NAC has been hampered, however, by high costs associated with burdensome policy interfaces, complex integration requirements, and lack of ROI."

Like any complex project, experts advise careful planning and design before rolling out a NAC implementation. "Put pen to paper before you put cable to box," advises Shimel. Forrester's Usman Sindhu concurs that inadequate planning is a major pitfall. Sindhu cautions that because NAC touches on virtually every silo within an IT organization, inadequate cross-functional collaboration can doom NAC projects.

Plan A NAC Project

As befits a complicated technology, experts don't advise a massive, full-scale rollout and instead counsel a phased NAC implementation. This gradualism extends to all facets of NAC deployment, including the extent and enforcement of access policies, the degree of enforcement automation, and the initial NAC user population. Brendan O'Connell, Cisco's NAC product marketing manager (www.cisco.com), says NAC users fall into three categories: guests

or transient users, temporary workers, and full-time employees. Different means of client control and enforcement will apply to each user segment, so he says it's important for new NAC deployments to consider each case separately and initially focus on one.

An incremental implementation can have various degrees of granularity, with Forrester recommending a three-phase approach while StillSecure proposes a five-phase plan, but they share some core best practices. First, NAC should be deployed in an interrogation mode in which the system gathers information about the devices on the network and the level of compliance with a test security policy. "Use this stage to determine what would happen if you were to implement a certain policy," says Whiteley.

The next step involves turning on limited policy enforcement by notifying users whose systems are noncompliant but not actively blocking network access. Forrester terms this deferred commit mode. In addition to alerting users, Shimel says some may want to incorporate selected manual remediation at this stage. The last phase involves enabling full, active NAC enforcement.

A Compelling Enterprise Tool

NAC is a powerful security technology that has matured significantly. Shimel says

the key to this maturation is vendors' better understanding of customer needs and usage scenarios. He notes that products now have many safeguards to prevent worst-case scenarios, such as the executive who is unable to access key PowerPoint files. As Shimel puts it, "Not every policy

violation has to be a death penalty." IT managers who may have dismissed NAC as a fledgling, costly, and potentially dangerous technology will find deploying current products, using some best practices and careful planning, doesn't have to be a career-threatening exercise. P

Common NAC Implementation Pitfalls

Building the business case and identifying NAC scenarios will limit the risk of NAC projects being derailed. However, Forrester has observed five common missteps that companies make during the deployment stage.

High Importance

- **Escalating costs.** Underlying components aren't enterprise-grade. Implementing NAC will dramatically increase utilization of core network components, so don't rely on open-source software running on outdated hardware.
- **Lack of granularity.** Many firms set out to put in place a single technology to manage both guest and employee access, but segmenting employee access is tricky and requires integration with an IAM (identity and access management) tool. Unfortunately, most NAC vendors lack this integration and supply a lackluster integrated solution.
- **Too many enforcement options.** Access control can't be rapidly altered. Deployments need to decide where to enforce access (Layer 2 or 3) and how to enforce (802.1x, DHCP, DNS, or IPsec). Few organizations understand the plethora of enforcement

options, never mind the cost/benefit tradeoffs for each.

Medium Importance

- **Poor end-user experience.** Manual remediation puts the burden on individuals, yet many NAC solutions don't provide a seamless, automated remediation process. For example, most solutions don't push down the latest antivirus definitions. Instead, they direct a user to a list of actions and links.

Low Importance

- **Interoperability woes.** Lack of standards thwarts enterprise-wide scalability. NAC is drowning in an alphabet soup of standards and consortiums—TNC, Cisco's Network Admission Control, and Microsoft NAP. Unfortunately, these only address a low level of NAC interoperability; none yet enables building an extensible policy framework that works fluidly with any vendor. The bottom line: Enterprises need to manually glue NAC components together or just use a completely proprietary solution.

Source: "Overcoming the Common Pitfalls of NAC"; Robert Whiteley; Forrester Research Report; April 2008.

Forecasting The Cloud

A Look At How Cloud Computing Will Impact The Enterprise Of The Future

by Christian Perry

• • •

As enterprises continue to hop on board the ever-expanding phenomenon of cloud computing, it is becoming difficult to imagine a future without the cloud. But seasoned executives who have endured failed computing fads in the past take cloud computing with a grain of salt. Will the cloud persist? If it does, how will it impact the enterprise?

"SaaS [software as a service] and cloud computing will enable enterprises to outsource more non-core IT functions to third-party providers and to reduce IT infrastructure costs," says Tyler Newton, research director and general partner with Catalyst Investors (www.catalystinvestors.com), a private equity firm focused on growth sectors of the economy. "It will also increase the availability of cutting-edge technology to businesses of all sizes, reducing the ability to use technology for competitive advantage."

Cloud On The Horizon

Today, the cloud allows enterprises to enjoy extensive IT services without the hassle and worry of managing or supporting the infrastructure around them. Experts predict that in the future, those benefits will continue, but traditional software architecture won't be heading for the exit any time soon. Newton says enterprise software will come in three forms: SaaS purchased from third-party providers, internally written software hosted on a cloud computing platform, and traditional on-premise enterprise software. He adds that standardized software platforms increasingly will be purchased on a SaaS basis, while heavily customized software will be a mix of SaaS, cloud, and on-premise.

George Symons, CEO of Yosemite Technologies (408/737-3311; www.yosemitetech.com), agrees, explaining that enterprises will have a mixture of in-house applications and applications delivered as a service. Those applications that are standalone—from a data perspective—and designed for a single purpose or department are good candidates to be delivered as a service, he says, because they will allow IT to be flexible and reactive without requiring a large staff. Other complex, mission-critical applications will require data sharing and dependency among applications.

"I don't think [the move to the cloud] is going to be exactly the same as in the early industrial age, when manufacturers produced their own electricity and then slowly converted to public power grids," says Jeffrey Pattison, CIO of INTTRA (www.inttra.com). "Some enterprises will put their core applications in a cloud, but there will be a big concern for reliability. Just as we have backup generators for electricity today, we need a backup for cloud-based processing."

Although Newton predicts the cloud could limit the use of technology for competitive advantage, Symons sees opportunity for an advantage with those complex applications that are intertwined. "This is where the enterprise might be able to have a differentiable advantage over competitors or simply require disparate applications to work off of the same data," he says. "These applications will continue to be installed and managed in the data center. I expect there will continue to be issues around corporate governance and compliance that will [require] many enterprises to house these applications and their data in-house."

According to Patti Dock, executive vice president and chief marketing officer of DataMotion (www.datamotion.com), people talked about cloud computing as a delivery model just a few years ago, but now there's a huge emphasis on the cloud being a cost-containment model. "I predict that within five years, we will see cloud computing being used as a productivity model. In this same time frame, we will move from discussing products in the cloud to productivity in the cloud, and the emphasis will shift from availability and scalability to transparency and from moving data through the cloud to a world where intelligent information knows how to traverse through the cloud," Dock says.

Cloud Complications

At the cloud's current rate, it's not outrageous to imagine that nearly all enterprise applications could find a home there. However, that's not likely to happen, experts say. Joe Sturonas, chief technology officer for PKWARE (www.pkware.com), predicts that the cloud won't contain all applications, partially because of intellectual property and data security concerns.

"Another complication we are seeing today is that some cloud providers are starting to evaporate—not just getting bought or participating in mergers, but disappearing altogether. [Some providers are] being reasonable and giving users plenty of time to remove their data . . . but those businesses will need to find an alternative service now," Sturonas says.

Applications that require high availability and guaranteed response time are unlikely to find their way to the cloud, Sturonas says,

---

Key Points

- Both cloud and in-house applications will continue to exist in future enterprises.
- Although any application could exist in the cloud, not all applications will make sense in that architecture.
- Smaller enterprises are more likely to utilize the cloud in the near future.

---

because the cloud model uses too many shared and unreliable resources, such as the Internet itself, which he says can become congested, and servers, which are hosted and include other applications or customers that can starve applications from CPU, I/O, and memory resources.

DataMotion's Dock says that while smart engineers can devise methods for moving any applications to the cloud, there will be practical reasons for enterprises to decide not to move everything there, such as security concerns, convenience, speed, and the general notion of practicality. "Think about having someone having access to your mainframe application from the cloud. I doubt operations people will be excited about the prospect. So even if it is possible, it is unlikely that all applications and services will [be] moved to the cloud," she says.

Smaller Heading Skyward

At some point in the future, cloud computing is bound to demand the rapt attention of nearly every enterprise. But moving forward, Catalyst Investors' Newton predicts that cloud computing will prove most compelling to smaller businesses with limited resources to staff and IT budget.

"Larger enterprises will be the last to fully embrace cloud computing and SaaS due to the IT investments that they have already made," Newton says. "Cloud computing will, however, dramatically reduce the cost of R&D for developing new software applications, which should spur innovation." ▪

Headed To The Cloud?

In theory, almost any application could exist in the cloud, though observers might question the value of its presence there. Predicting the future of the cloud can be difficult without basing that prediction on any real metrics, so Yosemite Technologies CEO George Symons (www.yosemitetech.com) looks at an application's cloud viability from a more practical standpoint: data ingestion.

"If data is created incrementally and accessed incrementally, then the cloud is perfect. If an application ingests and/or requires access to large amounts of data bursts and those bursts are consistent, the application is not well-suited for the cloud," he says.

For example, if a terabyte of data must be moved from system to system for analysis, the cloud won't be an ideal route for the data's travel, even with the increases we can expect in bandwidth over the next 10 years, he says.

Netcraft Reports Dramatic Rise In Web Sites

Here's a number to ponder: 185,167,897. That's how many Web sites Netcraft says responded to its survey—effectively, how many Web sites exist. Just five years ago, that number was about 37 million. The surge in growth is staggering, though encouraging for Web hosts.

The leading servers maintained their market-share dominance. Apache is still on top by a long shot, with Microsoft in a commanding second. Google is a distant third, with lighttpd rounding out the top four.

During the past two and a half years, the distance between Apache and Microsoft has diminished significantly, with Microsoft gobbling up chunks of Apache's market share.

One interesting facet of this growth is that the number of hostnames compared to active sites has spiked dramatically from about 18.5 million active sites vs. 37 million hostnames in 2002 to 74 million vs. more than 185 million this year.

According to Paul Mutton of Netcraft (www.netcraft.com), the increased differential between the two is more than likely due to the significant drop in price for domains. Today, companies and individuals will buy up all the domain names similar to their own and make sure those names redirect to the correct site. For example, the domain name for Company X may be companyx.com, but the company would also buy companyx.net, companyx.org, and so on. Further, when a customer signs up for a domain, some hosts create a template site instead of waiting for the customer to actually create and then actively maintain the site.

With that in mind, growth is clearer and easier to track when active sites are used as opposed to simply the number of hostnames. With this method, there shows a clear upward trend in terms of growth across all domains.

Spikes In Size

Apache and Microsoft, though still clearly on the way up, have experienced erratic spikes in size as Google—which has only been in this game since mid-2007—continues to grow. With the exception of lighttpd, the top servers, as well as the combination of all smaller servers, have all grown significantly in recent years.

According to Mutton, this incredible growth, especially during the past five years, has largely been fueled by the increased proliferation of blogs and social networking sites such as MySpace and Facebook. Additionally, Mutton notes that online advertising has contributed to growth. Even personal Web sites can use features such as Google's Adsense to generate income from their sites.

It's worth noting that blogs and social networking sites are free sites, though often peppered with advertising—perhaps it's no coincidence that all three have contributed so much to Web growth.

by Seth Colaner

▌ Survey: Fear Of Job Loss Affects Employee Behavior

A survey of 600 New York, London, and Amsterdam white-collar workers revealed that about 56% of those surveyed feared losing their jobs; moreover, it found that this uncertainty would prod more than a third to agree to 80-hour weeks and 25% to agree to pay cuts in order to save their situations. The survey also found that fear of losing jobs can bring out some very undesirable, often illegal, behavior: 71% said that, if fired, they would take sensitive information, such as customer and contact databases or access codes, to help them secure a job with a competitor. In fact, 58% of U.S. workers have already downloaded the information just in case.

▌ Open Solutions Alliance Taps Gold

The OSA (Open Solutions Alliance), a non-profit industry group that advocates adoption and integration of open-source software, has announced that Anthony Gold, the former vice president and general manager of open-source business at Unisys, will take the helm as the OSA's president. He replaces Dominic Sartorio, who worked for SpikeSource before serving as president for the OSA. Gold will be joined by Scott Barnett, COO at Bluenog; Gopi Ganapathy, CEO of Essentia; and Mike Moody, vice president of engineering at Jaspersoft, all new to the organization. Uwe Vielle, already employed by the OSA, will round out the new leadership team.

▌ Vista SP2 Almost Out Of Beta

The latest beta version of Vista's Service Pack 2 has been released, and insiders at TechARP.com—which correctly predicted the final releases of Vista SP1 and WinXP SP3—believe a final release candidate will be made available in February 2009. It is believed that the service pack will be complete in April 2009, with a final release date unknown. Vista SP2 will include a number of upgrades, including Blu-ray Disc recording capabilities, support for Bluetooth 2.1, better Wi-Fi performance, and optimized sidebar gadgets. Windows Search 4 will also be included.

▌ Greater Focus For Business Process Management

Advances in technology that provide workers with remote access and streaming content are leading to renewed interest in BPM (business process management), according to recent research from AIIM. About 56% of respondents indicated that they have implemented BPM projects ranging in scope from departmental to enterprise-wide. Additionally, 44% noted that although they have yet to begin a significant BPM project, a plan to do so should happen in the coming year. The largest focus for BPM was the back office operations for a primary project; closely followed focuses were IT, human resources, and customer service. In particular, 37% of those surveyed cited the need for a balance between transactional and document-centric processes. The lack of interchange standards among process modeling and execution tools was a primary concern of the 354 end users surveyed.

An Action Plan For Cloud Computing

Is Your Enterprise Prepared To Reach For The Sky?

by Chris A. MacKinnon

• • •

IF YOU HAVEN'T HEARD of cloud computing, you soon will: It's a concept that aims to deliver supercomputing power, storage, and other managed services over the Internet, and it won't be long before it affects the way business is done in the enterprise. It's clear that small to midsized enterprises will eventually utilize a cloud computing infrastructure for at least some of the applications and services they rely on. So what can IT and data center managers do to prepare their enterprises for this movement?

Get Ready

Sajai Krishnan, chief executive officer at ParaScale (www.parascale.com), believes that, given the wide-ranging nature of cloud computing, most SMEs will eventually use cloud computing in their infrastructures in some capacity. "For example," he comments, "the ability to scale up processing for peak load calculations is a great use of cloud infrastructure and something any organization can afford."

Cloud computing is cost-effective for a number of services and needs, but for some aspects, such as storage, the answer is not so clear, according to Krishnan. He continues, "Given the low cost and capacity of storage appliances, it remains to be seen if the small to midsized enterprises will deploy storage into a public, external cloud [via a service provider] or build a private, internal enterprise cloud [inside the company's firewall]." Enterprises must decide what aspects of their infrastructures will best benefit from cloud computing.

Krishnan also says shifting the enterprise mindset to seeing IT as a service is a good first step in the migration to cloud computing. He explains, "IT managers need to start thinking beyond the hardware and physical infrastructure. No doubt, this does not go away, but the idea of technology as a service like electricity is a mindset change over existing practices. This change can be incremental, and it is a good time now to start a

small implementation to understand the technology, whether it be public or private."

Rod Boothby, vice president of platform evangelism at Joyent (www.joyent.com), says companies do not need to do a lot of preparation beyond adjusting mindsets and determining what is best implemented in the cloud. He says that cloud computing services, whether they are IaaS (infrastructure as a service), PaaS (platform as a service), or SaaS (software as a service), can all be used straightaway.

Key Points

- SMEs should be looking at IT primarily as a service when considering the move to cloud computing.
- Noncritical applications will likely be moved to the cloud first at small enterprises.
- SMEs need to look out for custom protocols and "cloud lock-in"—after your data is in the cloud, it can be difficult to move.

Out Of The Gate

In Krishnan's opinion, the types of applications and services likely to be moved to the cloud first at smaller enterprises include noncritical applications that use varying amounts of processing power. He elaborates, "Storage applications that produce huge data sets, require longevity of file access, and need low-cost deployments are good candidates for private clouds. A public cloud can be a good DR option."

Boothby says Joyent is currently seeing lots of marketing- and sales-related applications, such as brochure sites, community sites, blogs, wikis, and forums, migrating to the cloud. He notes, "We have some major e-commerce applications running on Joyent . . . but so far the deployments number in the dozens. Typically, larger enterprise users begin with applications that are considered lower risk. They test the cloud. Once they get comfortable, they start to move more applications onto the cloud."

Before anything happens, Krishnan says, do your research. He explains, "Look at the providers and make sure they are financially stable, support open standards, and do not lock you into their architecture. There are also many options for education with

limited vendor bias through unconferences like CloudCamp, [on] online user forums, [in] the myriad of cloud blogs that exist, or by reading periodicals. Note also that small-scale cloud deployments are also possible. It is very feasible to experience this technology, public or private, without a big dollar commitment."

Potential Pitfalls

Krishnan says SMEs need to watch out for a few pitfalls. He notes, "Small to midsized enterprises should watch out for custom protocols and 'cloud lock-in'. Many cloud providers use custom instances, and once your data is in [a] cloud, it becomes very difficult to move it to another cloud. Security is also a major concern when considering public clouds. Don't overestimate what the return will be." Krishnan adds that if it sounds too good to be true, it likely is.

In terms of pitfalls, Boothby says running on the cloud does not mean that all your high-availability or scalability problems are automatically solved. "You still need to think about how you deploy and where bottlenecks within your application could prevent you from reaching your scale goals," Boothby says. And, depending on the application, there may be some specific issues around security, operations, and migrating to the cloud that need to be resolved.

But both Boothby and Krishnan have plenty of tips and advice that will help SMEs through the cloud computing transition. Boothby says, "For starters, talk with your cloud vendor and plan your migration. You are more likely to succeed if you can discuss the details of your plan with a scale consultant that works for the company." Krishnan says it's important for SMEs to consider many options before even starting. He comments, "Engage end users and management early in the process to gain buy-in and credibility. It's also important to equally consider small and large vendor technology, as this is a new space and incumbents have yet to be determined. Finally, start small and scale when comfortable and sure of the final results." P

> ## Enterprises must decide what aspects of their infrastructures will best benefit from cloud computing.

Cloud Techniques

Rod Boothby, vice president of platform evangelism at Joyent (www.joyent.com), says on a cloud such as Joyent's, the same techniques that apply in a traditional data center can be used to help you within the cloud:

- Horizontally scaling your application layer with the help of hardware load balancers
- Setting up silos for application-layer functionality to help you separately scale things such as statics.example.com, admin.example.com, uploads.example.com, and www.example.com
- Vertically scaling your database and state layer
- Splitting your reads and writes and setting up pools of load-balanced slaves to independently scale up the read functions

---

NETWORKING & VPN NOVEMBER 7, 2008

Attachmate INFOConnect Enterprise Edition 9.0 is a host access mainframe package designed to provide Unisys mainframe users with secure, streamlined multihost access; reduced costs; and enhanced productivity.

(800) 872-2829

www.attachmate.com

Extending The Value Of Mainframe Applications

Attachmate INFOConnect Enterprise Edition 9.0

To give companies a host access mainframe package for those using Unisys mainframes, Attachmate has unveiled INFOConnect Enterprise Edition 9.0. This latest version is designed to help companies extend the value of mainframe applications, boost end-user productivity, and reduce costs. It boasts the Microsoft Windows Vista certification and enhanced security features, all designed to deliver secure, productivity-focused multihost emulation.

By improving information flow, enhancing user productivity, and lowering total cost of ownership, INFOConnect is designed to streamline multihost access in a single application, increasing efficiency and providing modernization of existing mainframe applications right out of the box.

INFOConnect Enterprise Edition 9.0 includes FDCC (Federal Desktop Core
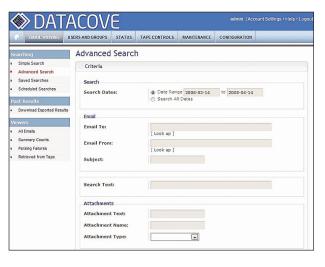
Configuration) compliance, FIPS validation, support for IPv4 and IPv6, and DoD PKI standards support.

Vista certification lets IT managers support desktop technology changes while leveraging their preferred platforms. The FIPS validation includes Reflection Secure FTP Client and SSL support to give companies an encrypted, secure FTP solution. IPv6 and IPv4 support enables INFOConnect Enterprise Edition 9.0 to connect to the mainframe on the network even as Internet standards continue to morph. DoD PKI is the highest level of government security, ensuring that companies using INFOConnect Enterprise Edition 9.0 will be safe and secure.

attachmate

MESSAGING & TELEPHONY OCTOBER 31, 2008

Tangent's DataCove Hosted email archival service captures, indexes, and encrypts all email, attachments, and digital faxes and stores them in a centralized repository for long-term archival.

(650) 342-9388 ext. 2136

www.DataCove.net

Capture & Index All Email & Attachments

Tangent DataCove Hosted Service

Because of recent regulations such as Sarbanes-Oxley, HIPAA, and federal and state e-discovery rules for civil procedures, enterprises need to be able to store, search, and retrieve emails for as long as seven years. Secure storage and quick retrieval are essential.

The hosted version of Tangent's DataCove email archival solution solves the problem by capturing and indexing all email, attached files, PST, and digital faxes. The ESI (electronically stored information) is sent to a central repository located at the Tangent facilities. The repository is equipped with fault-tolerant, redundant, and secure servers to ensure uninterrupted service.

DataCove SaaS email archiving offers a fully searchable database with intuitive menus for easy use and retrieval. Like DataCove's appliance, the hosted service archives email from

email servers such as Microsoft Exchange, Lotus Notes, Novell GroupWise, Sendmail, Imail, and all standard message transfer agents utilizing POP3, IMAP, and SMTP protocols.

Features include:

- Email archival compliance
- Management and access via Web-based GUI and Outlook connector
- Message indexing and storage, with redundant disk and media archiving for long-term storage
- Advanced, Web-based, and scheduled search options
- Reliable, long-term storage including automatic archive to AIT WORM tape
- Advanced encryption technology
- 256-bit AES encryption

DATACOVE

PRODUCT OF THE WEEK

Configuring A Network Topology

Transition Networks Media Converters Help SMEs Rise To The Challenge

by John Brandon

• • •

ONE OF THE ISSUES facing data center managers is establishing a network topology. With the advent of fiber networking, there's a question about whether to do a wholesale replacement or patchwork upgrades, especially in companies that have fewer than 1,000 employees.
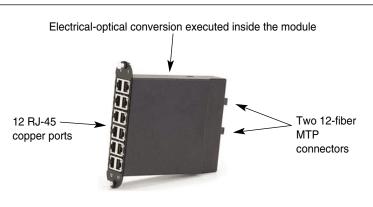
Many smaller enterprises have Ethernet installed not only in office locations, but also as the main network cabling to the data center, as well. Transition Networks (952/996-1526; www.transition.com) has addressed this problem with its media conversion products, including an entire chassis sold in conjunction with Corning

PRODUCT OF THE WEEK

Transition Networks Plug & Play Universal Systems Gigabit Ethernet Media Conversion Module

Description: A chassis with support for up to 96 ports that is designed to help SMEs convert from Ethernet cables to fiber without losing their investments in Ethernet equipment or cabling.

Interesting Fact: Transition Networks focuses on the "vertical" infrastructure—the cabling that runs from one floor to another and to the server room—and leaves the "horizontal" infrastructure intact.

(952) 996-1526
www.transition.com

Cable called the Plug & Play Universal Systems Gigabit Ethernet Media Conversion Module, which bridges the gap between Ethernet and fiber cabling. For an SME, media conversion solves this critical topology challenge.

"Our media converter products address this problem: Organizations have spent IT dollars on copper-based equipment [and want to keep that investment], yet they see the benefits of fiber," says Curt Carlson, product manager at Transition Networks. "They want to protect their investment in Ethernet infrastructure."

Fiber Benefits

SMEs have long understood the benefits of fiber. Initially, the wake-up call came in 1999 and 2000 during the dot-com bubble, when service providers started installing fiber optic cabling—the benefit of which we still realize today, long after the bubble burst. According to Carlson, fiber can support greater distances for networking, up to 2,000 meters compared to just 100 meters for Ethernet, before the network has to be retimed with another switch, which adds to the cost of the network infrastructure. Fiber is also protected from the network interference that disrupts performance for Ethernet-based networks. Government and military institutions gravitated to fiber for the security benefits, but companies of all sizes understand that fiber is the future of networking because of the nearly unlimited bandwidth capacity. Even at large universities, fiber cabling is becoming more and more prevalent.

However, only large enterprises can afford wholesale Ethernet replacements. A smart compromise—which isn't really a compromise at all because all of the benefits to fiber still exist, and the network runs just as fast—is to use media conversion modules. These devices convert Ethernet cabling such as those running to desktop computers in an office to fiber installed within the walls of the building

and down to the data center. Ethernet still runs at optimal speeds, but there is no longer a need for as many network switches in the building or the maintenance and retiming required.

"In the typical high-rise office building, where Ethernet runs to the desktop, there

Electrical-optical conversion executed inside the module

12 RJ-45 copper ports

Two 12-fiber MTP connectors

are many Ethernet switches," says Carlson. "Companies may use a star topology for each floor. With media conversion, each floor can maintain the copper wiring for horizontal cabling and then convert to fiber in vertical orientation. They see the benefit of fiber without having to rip out all of the copper."

Carlson says an SME does not have to run fiber all the way to the desktop or to a server room on each floor, stating that the expense for that replacement is usually very high.

Preventing Performance Bottlenecks

The other detriment to using all Ethernet wiring in a building has to do with performance. Networks need constant tweaking and maintenance to weed out interference and congestion problems. Fiber works as a "backhaul" to make the network run at the highest speeds possible.

"Our media converters run at wired speed, and they are transparent to the network," says Carlson. "There is no measurable latency; there are no problems with distance to the data center."

Carlson says not all media conversion products are the same. Some simply "store and forward" according to the Ethernet Layer 2 network topology. Transition Networks' media conversion can, for example, take 12 ports of Ethernet cabling through its Corning Plug & Play Universal

Systems Gigabit Ethernet Media Conversion Module and convert those channels to one fiber cable.

Copper wiring also requires more maintenance and has more bulk; in a data center, that leads to cooling problems and massive heat buildup. Media conversion benefits an SME in that the cooling requirements are lower with less wiring, which saves in cooling costs.

"Bulkier cables can block ventilation," says Carlson. "Conversion to fiber helps reduce this clutter on and the amount of cables on trays in a raised-floor data center."

Media Conversion Options

Transitions Networks and Corning Cabling Systems jointly developed the Media Conversion Module, which is a chassis that SMEs can use for media conversion from Ethernet to fiber. Each module made by Transition Networks consists of a row of 12 1000Base-T RJ-45 ports on the front of the unit and 12-fiber MTP 1000Base-SX optical ports on the back of the chassis, extending network transmission length to 750 meters per module. The chassis that holds each module, made by Corning, holds up to eight modules and two redundant power supplies for a 96-port density.

The chassis provides a wealth of options for SMEs to gradually upgrade their buildings to fiber by adding additional modules as they convert more of their Ethernet cabling to fiber.

The chassis has several additional features. Modules can automatically convert twisted-pair ports to the correct MDI or MDI-X configurations. Link Pass Through is a unique feature that monitors both the copper and fiber wiring; it can notify admin staff of a signal loss for either. 802.3u auto-negotiation configures the modules on the fly for the best conversion mode. Additionally, a feature that automatically re-establishes the connection in case of failure can help admins who do not have the time or training to constantly retune networks for the best performance. Redundant power supplies in the chassis are hot-swappable in case of failure, as well, making the product easier to manage.

Overall, Transition Networks' Plug & Play Universal Systems Gigabit Ethernet Media Conversion Module chassis helps SMEs stay current with evolving data center technology without having to remove all existing network infrastructure. It's a gradual, and smart, transformation that can change according to the needs and growth of your business. **P**

Enclosed Server Rack For Noise Reduction

GizMac XRackPro2

Noise from computer equipment is on the rise. As the manufacturers of computer equipment try to squeeze more computing power into less space, heat increases, while fan size often shrinks. With more heat and smaller fans, computer equipment becomes louder and more irritating from the faster spinning, high-pitched fans.

GizMac XRackPro2 is the solution for noise produced from rackmount equipment. The XRackPro2 enclosed server rack can reduce computer equipment

noise up to 80%. Based on an industry-standard four-post rack and a deep rail-to-rail distance, the XRackPro2 can accommodate most types of rackmount equipment and will help create a more productive workplace by removing distracting noise.

Loud rackmount computer servers, RAID systems, switches, and other equipment become much quieter inside the XRackPro2. This acoustically engineered rack uses multiple sound reduction methods to reduce the noise levels.

The significant reduction in noise of the equipment inside the XRackPro2 allows people to work near loud computer systems without distraction.

In addition to reducing noise, the XRackPro2 filters the incoming air, provides key-lockable doors, and allows for mobility. Air filters, locking doors, and wheel options are available on all models. These additional features provide benefits that make the XRackPro2 an even greater value in the fight to reduce computer equipment noise.

GizMac XRackPro2 rackmount cabinets reduce noise and are ideal for Apple, Linux, SGI, Sun, Windows, and other PC servers.

Starts at $599.99

(800) 475-1677

www.XRackPro.com

XRackPro

By GizMac

Product Releases

CLIENTS

■ Cabinet NG CNG-ONLINE

Cabinet NG released CNG-ONLINE, a hosted document management solution. CNG-ONLINE provides the security and availability of CNG-SAFE in the form of SaaS. The Shared Access Filing Environment allows enterprises to utilize document management, eliminate paper piles, and automate workflows firm-wide. CNG-ONLINE can run the CNG-SAFE document management software in ONLINE or local environments. CNG-ONLINE relieves a small enterprise's burden of handling administration, backup, and software configuration responsibilities. However, the look and feel of CNG-ONLINE is the same as CNG-SAFE's customized cabinets, filing structure, and naming templates. CNG-ONLINE's base configuration is available for single or multiple users and includes a repository, two filing cabinets, 5GB storage, backup, training, up to 10 document-

naming templates, and user rights assignments.

■ FrontRange License Manager 3.0

License Manager 3.0, a tool designed to help organizations automate the process of managing software license entitlements, is available from FrontRange Solutions. License Manager 3.0 is designed to accelerate the process of reconciling usage against entitlement for Microsoft software licenses through the ability to bulk-upload licensing data from the Microsoft CLP report and then subsequently automatically reconcile the data against a full audit of the network. Other features include central management of entitlements for Microsoft server products that use either CALs (client access licenses), such as SQL Server, Exchange, and Terminal Services, or per-processor licensing, as well as the ability to create and manage CALs based on per-device or per-user.

■ IBM Healthcare Image & Information Grid

IBM introduced its HIIG (Healthcare Image and Information Grid) framework, which combines advanced imaging and information archiving technologies to deliver health care and research organizations access to critical imaging and diagnostic information at the point of care. IBM's HIIG framework is a services-oriented offering and is built on IBM's virtualized and automated GMAS (Grid Medical Archive Solution), which is used to protect and share critical medical and research data. Features include the ability

to view patient documents and images across the enterprise in real time, support for both transactional and research data, real-time failover and synchronization, petabyte scalability, and other automation and virtualization capabilities.

■ Lantronix MatchPort SDK

Lantronix announced an enhanced software development kit for its 32-bit MatchPort products, which incorporates wireless support for its wireless networking module, MatchPort b/g Pro. The SDK allows users to add wired and wireless network connectivity into devices to make them accessible via the Internet. The new MatchPort SDK supports 802.11 technology, and it features active scanning for available access points and the capability to configure multiple WLAN profiles.

■ National Instruments Measurement Studio 8.6

National Instruments has released Measurement Studio 8.6, which increases test and measurement functionality for Visual Studio 2008, Microsoft's newest development environment. Measurement Studio 8.6 features a complete set of .NET and C++ class libraries; device and information attainment; and instrument management driver support for Microsoft Visual Studio 2008, MFC (Microsoft Foundation Class Library) 9.0, and the .NET Framework 3.5. It also supports programs with certain modular instruments by constructing benchmark programs in Visual Studio 2008. Additionally, Measurement Studio 8.6 is designed to make connecting to and communicating with a broad range of tools easier and makes attaining information

from GPIB, USB, serial, Ethernet, and PXI and VXI instruments faster.

■ Parallels Operations Automation 2.8 SaaS Module

Parallels released its latest addition to the Parallels Operations Automation 2.8 software: a SaaS Module featuring APS (Application Packaging Standard). Parallels Operations Automation is designed to increase provisioning and streamline data-center operations. Using the product, end users can now access third-party applications through their service providers more easily, due to the enhanced SaaS Module. Functioning as a scalable and manageable solution, the SaaS module can automate a broad range of applications via the flexible control panel that offers plan templates.

■ Planar Clarity Margay II

A high-definition 50-inch rear-projection display is available from Planar. With automatic image optimization, the Clarity Margay II enhances the features of the original Clarity Margay with wide-screen video. Featuring a 1,920 x 1,080 HD resolution and deep color saturation, the Margay II uses the Planar Precision uniformity correction and image alignment to produce a seamless picture. The Margay II also includes front and rear service access. Available next month, pricing will start at $10,485.
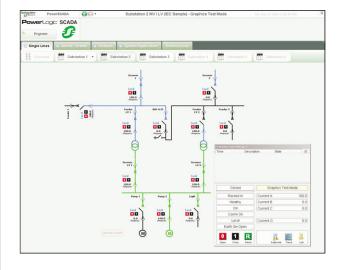
NETWORKING & VPN

■ Adtran NetVanta 3G Network Interface Module

Adtran has added broadband abilities to its NetVanta 3305 modular router with the

---

Product Releases

ADTRAN

NetVanta 3G NIM (Network Interface Module), which the company says is certified for use with Verizon Wireless' BroadbandAccess Wireless Router service. The module provides secure connectivity when used with Adtran's NetVanta 3305 modular router, and it can also be used as a reliable network failover/backup option for large enterprises or as a primary connection for smaller enterprises. When used as a backup option, the module and router can divert network traffic to a 3G connection in case of a primary circuit failure. The NetVanta 3G NIM has a price of $795; the NetVanta 3305 is listed at $1,295.

ARBOR NETWORKS

■ Arbor Networks Peakflow X 4.1

Arbor Networks released Peakflow X 4.1, software that provides network visibility to allow enterprises to monitor external security threats, internal network usage, and bandwidth-sapping applications. Peakflow X 4.1 features enhanced IP QoS reporting, increased mitigation capabilities, and a new controller offering for improved solution scalability. Additionally, version 4.1 provides usability and configuration enhancements, including a customizable summary page and support for IPv6 deployment. The expanded IP QoS reporting capabilities allow customers to search and report on traffic running at different QoS levels in order to identify possible misconfigurations or traffic level issues. An enterprise-wide controller provides the scalability to keep pace with the growing size, speed, and complexity of large distributed enterprise networks. The increased scalability lets Peakflow X support many collectors and helps larger enterprises future-proof their Peakflow solution.

■ IBM Rational Requirements Composer

IBM launched its Rational Requirements Composer, which is a software platform designed to automate paper-intensive aspects of the software delivery process to help organizations automate business processes and reduce paper consumption. IBM Rational Requirements Composer, based on the IBM Jazz technology platform, digitizes lines of text into diagrams and converts paper requirements into storyboards that can be shared over the Web for local- and remote-user collaboration in real time. Other features include Web 2.0-style linking, tagging, and conversations.

■ Ipswitch WhatsUp Gold WhatsConnected

WhatsConnected, a plug-in for WhatsUp Gold, is available from Ipswitch. WhatsConnected is designed for Layer 2/Layer 3 discovery, mapping, and visualization, providing visibility into both physical and IP connectivity, including VLAN-specific information. WhatsConnected enables network managers to focus on managing networks more effectively, combining the power of Layer 2 discovery, mapping, and visualization with WhatsUp Gold's comprehensive network management and monitoring, thus removing the need for manual documentation. Other features include the ability to automatically generate fully customizable topology maps and help for managers to understand device interdependencies.

motive

■ Motive WiMAX Service Management Solution

Motive, a part of Alcatel-Lucent, has announced what it says is the industry's first product that manages fixed, nomadic, mobile, and embedded WiMAX devices with its WiMAX Service Management Solution. Motive says the product will let service providers get new WiMAX customers up and running quickly, while simultaneously reducing costs and complexity, and it recently demonstrated the interoperability of the product on a ZyXEL MIMO MAX-206M2 residential gateway. In what Motive says is an industry first, the new product complies with TR-069 and OMA-DM standards-based protocols, which will help operators automate and manage such processes as service provisioning, problem diagnosis and resolution, and ongoing maintenance across various WiMAX devices.

■ Novell Open Enterprise Server 2 SP1

Novell announced Novell Open Enterprise Server 2 SP1 (Service Pack 1) with Domain Services for Windows, a feature that enables seamless integration with Microsoft Active Directory. Customers can use Novell Open Enterprise Server to manage user and group policies through the Microsoft Management Console, thereby simplifying administration, reducing costs, and leveraging their existing investment in Novell technology. Open Enterprise Server 2, built on the SUSE Linux Enterprise platform, delivers interoperability for Windows, Linux, Macintosh, and NetWare environments. This latest release delivers new features and functionality, including enhanced AFP (Apple Filing Protocol) and CIFS (Common Internet File System) support; improved upgrade utilities; and an updated file synchronizing and accessibility tool, Novell iFolder 3.7. Novell Open Enterprise Server 2 SP1 is available now as a standalone product and will be available as part of the Novell Open Workgroup Suite within 30 days.

SMC Networks

■ SMC Networks SMC 8x4 Cable Modem

SMC Networks has announced it has samples available of its SMC 8x4 Cable Modem, which it says is the first eight-bonded downstream channel and four-bonded upstream channel business-class modem that can deliver up to 320Mbps of downstream speed. SMC Networks says the cable modem uses Texas Instruments' TNETC4840 channel-bonding technology, which is a member of TI's Puma 5 family of DOCSIS 3.0 chipsets. The technology lets MSOs (multiple system operators) deliver high-speed Internet access and advanced networking abilities. SMC says the increased downstream channels allow for enhanced flexibility and more precision in network scalability, resulting in quick and targeted bandwidth deployment. The modem includes a GbE port and supports high-throughput IPv6 and IPv4 and RIPv1/2. Other features include static IP, a firewall, NAT, VPN termination, and full-featured CLI.

STORAGE   **OCTOBER 24, 2008**

Backup & Recovery At Disk Drive Speed

Dynamic Solutions DSI9000 v.2 VTL Family

The Dynamic Solutions DSI9000 v.2 family of virtual tape libraries can support up to 64,000 virtual tape volumes in a single node.

Start at $20,000 for one entry-level DSI9152

(303) 754-2000

www.dynamicsolutions.com

dynamic solutions international

Having a disaster recovery plan is a must for any company. Data is precious, and it can't always be replaced if lost. Dynamic Solutions offers a cost-effective option for enterprises with version 2 of the DSI9000 family of VTLs (virtual tape libraries).

The DSI9000 v.2 VTLs are designed to reduce the need for tape for backups and to speed up the backup and recovery process. The family of VTLs supports end-to-end high-speed connections and multistreaming, multisession backups and connects to many different backup servers and mainframes.

These powerful features create a secure, streamlined backup process.

Unisys MCP and OS2200 environments are supported, and DSI has its own host-based software for tape and library management for MCP. The DSI9000s support up to 64,000 virtual tape volumes in a single node and use ANSI Fibre Channel (4Gb) to attach to mainframes and open systems. They can connect to Unisys MCPvm, MCP, and OS2200 platforms as well as OpenVMS, Unix, Linux, and Wintel open systems. They also support high-availability pairs with failover capability.

Other features of the DSI9000 v.2 VTLs include data replication at a single node or across an enterprise and certification with leading backup applications and tape libraries. Plus, the VTLs can be customized for individual applications.

The DSI9000 v.2 VTL family is the third generation of virtual tape solutions by DSI and continues the company's goal of offering innovative and competitive storage solutions for data backup and recovery.

Product ✐ Releases

■ Solectek SkyWay Excel Series

Solectek announced the SkyWay Excel Series, its new line of 5.8GHz Broadband wireless products. The series provides 100Mbps of usable net throughput at a long range, and the RF packet transport is optimized for high-capacity links for the maximum throughput over long distances. The SkyWay Excel Series also features 4.9 to 5.8GHz PTP links based on 2x2 MIMO, audio tones for easy antenna alignment, 128-bit AES encryption/decryption, and two levels of AAA protection.

■ Trendnet TEG-424WS

Trendnet has added a 28-port entrant to its Web Smart switch family. The TEG-424WS provides Layer 2 management with a Web-based console. With four Gigabit and 24 10/100Mbps ports, all full-duplex, the new switch is designed to provide a secure backbone for SMEs. The scalable system also features two shared mini-GBIC slots, QoS, load balancing, trunking, 802.11q VLAN, and broadcast storm control.

■ Unisys InfoImage Connector

Unisys announced the Unisys InfoImage Connector for Microsoft Office SharePoint Server 2007. Unisys InfoImage Connector was developed in collaboration with Microsoft and enables Unisys customers to connect Microsoft Office SharePoint Server 2007 and Unisys InfoImage document imaging and workflow solutions. Unisys InfoImage is used by financial services firms, government agencies, and other organizations to process high volumes of loans, claims, and tax forms in digital form. Microsoft Office SharePoint Server 2007 is a leading collaboration and portal software suite. Unisys believes that combining these technologies will enable users of both solutions to enhance productivity and improve their ability to comply with disclosure requirements. With this new solution, Unisys and Microsoft are enabling enterprises to easily manage the increasing amount of data that organizations are responsible for storing and managing, freeing IT departments to focus on other critical functions. The InfoImage Connector for Microsoft Office SharePoint Server 2007 allows enterprise users to repurpose content and manage records across both solution suites, regardless of where the content was created. The InfoImage Connector can be scaled horizontally or vertically to manage volume and optimize performance.

PHYSICAL INFRASTRUCTURE

■ Eaton EPM

Eaton announced Eaton EPM (Enterprise Power Manager) software and a full line of power cables that allow data center managers to measure and manage power at the rack and server levels. With Eaton's EPM software, data center managers can now monitor and manage a virtually unlimited number of enclosure power distribution units and midrange UPSes with a cohesive, enterprise-wide view, rather than viewing the status of each ePDU or UPS (uninterruptible power supplies) individually. EPM's single interface, reporting capabilities, and notification settings aggregate the power management information to allow data center managers to proactively analyze and plan. The graphical view and reporting features of EPM also allow data center man-

---
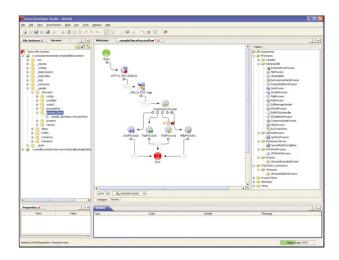
NETWORKING & VPN | **OCTOBER 24, 2008**

Xenos Enterprise Server helps enterprises centralize and streamline information data flows.

$70,000

(905) 709-1020

www.xenos.com

Centralized Management Of Structured & Unstructured Data

Xenos Enterprise Server

Information flows in and out of businesses every day in high volumes, yet most of it is in incompatible formats. This inconsistency in the way information is received and gathered can inhibit crucial business endeavors such as mergers, acquisitions, and the creation of new information supply chains. Xenos Enterprise Server is an application designed to alleviate this problem by offering a scalable architecture framework so companies can better extract, transform, and repurpose both structured and unstructured data.

Xenos Enterprise Server is a server-based infrastructure solution designed to give complete organizational control over data and document transformation from a central location. The software is designed to be flexible and easily integrates into a company's existing information supply chains. This gives companies better efficiency, enhances business processes, and reduces compliance management risks. Migrating legacy documents and image archives, facilitated by Xenos Enterprise Server, can help reduce license, maintenance, and training and support costs.

The Xenos ES is built on J2EE architecture, which is fault-tolerant and server-based, with the ability to quickly process millions of transactions. Other features of the architecture include job scheduling, load balancing, clustering, monitoring, failover, notification, and error handling. The software is highly scalable and component-based, supporting the extraction, transformation, and repurposing of data in the enterprise, effectively granting companies access to the business-critical content necessary for Content-Enabled Vertical Applications.

❖ xenos

Product Releases

agers to easily use advanced customization capabilities.

SECURITY

■ Absolute Software, Intel , Lenovo ThinkPad T400

In a three-way collaboration between Absolute Software, Intel, and Lenovo, select Lenovo ThinkPad T400s will ship with hardware-based antitheft and computer-theft deterrence technology. Models that include Intel Centrino 2 processor technology with Intel vPro technology will ship with Intel Anti-Theft PC Protection, which only needs to be activated by a company's IT department. Intel's hardware-based security application will work hand-in-hand with Absolute Software's Computrace security service to detect security issues and respond accordingly.

■ CA Internet Security Suite Plus 2009

CA introduced the CA Internet Security Suite Plus 2009, an antivirus, antispyware, antispam, and antiphishing software with a personal firewall that protects users from emerging online threats. The software features a single console from which users can monitor the security status of other licensed PCs on the network. Other features include integrated parental controls, backup and restore utilities, an intuitive help desk, support for DKIM (Domain Key Internet Mail), SPF (Sender Policy Framework) industry-standard email security protocols, continuous upgrades, and silent protection. A one-year subscription for CA Internet Security Suite Plus 2009 for up to five PCs is available for $79.99.

■ CryptoCard CD-1

Just out from CryptoCard is the CD-1 credit card display token, which uses two-factor authentication and secure one-time passwords to combat CNP (card not present) fraud in online and phone transactions. The idea is for consumers to carry an integrated device, such as the CD-1 payment card, and for banks to run corresponding software to securely identify each customer.

■ DNF Security Falcon Hybrid EQ Series

The Falcon Hybrid EQ series of high-performance hybrid surveillance systems is available from DNF Security. The systems are designed to be compatible with leading IP and analog cameras. The series includes five models, ranging in capacity from 4 to 48TB, and offers scalability from four to up to thousands of cameras. A common interface supports analog, IP, megapixel, and high-definition cameras on the open-platform systems. The devices feature dual quad-core Xeon processors, up to 16GB of internal memory, and support for 16 analog and eight IP cameras.

■ Entrust IdentityGuard Platform

Entrust announced enhancements to its IdentityGuard platform. The improvements include greater self-service capabilities, including the Entrust eGrid—an innovative approach to delivering strong second-factor authentication without deploying a physical device. Entrust's eGrid cards provide dynamic multifactor authentication, and the advanced soft-grid format enables organizations to implement strong authentication without requiring end users to carry expensive third-party hardware tokens. Supporting a range of formats, including Adobe PDF, graphics, or text, the eGrid is an easy-to-use and cost-effective way of delivering strong authentication. The IdentityGuard platform also offers the ability to increase protection on PDF grids and use Adobe's rights management features, including password-based encryption, providing increased security on a highly deployable form factor. Entrust IdentityGuard includes self-service capabilities to deliver streamlined enrollment of new users, which is a critical process for both enterprise and consumer-based deployments.

■ Firetide Wireless Connectivity

Firetide has announced wireless connectivity for alarm monitoring and response supervision for fire, security, and life safety professionals. Building operating managers can also use this technology. Firetide has provided the wireless mesh technology for Digitize, which is designed to increase efficiency and decrease installation and retrofitting costs. Several layers of security are offered by Firetide's technology, including WPA2 (Wi-Fi Protected Access 2), WEP (Wired Equivalent Privacy), and AES encryption. Additionally, proprietary encapsulation mechanisms are included to guard data streams from decoding and interception. This system can also support mass notification, building operating management, video surveillance, HVAC, and access control.
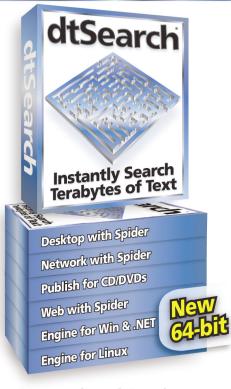
SERVERS

■ Fujitsu Resource Coordinator Virtual Edition

Fujitsu Computer Systems announced availability of RCVE (Resource Coordinator Virtual Edition), software that provides enterprise data centers and cloud computing providers with improved management control, rapid reconfiguration capabilities, and fully automated failover for both physical and virtualized blade servers. RCVE reduces the time and resources needed to install, configure, and recover workloads on blade servers, regardless of whether the servers are physical or virtualized. RCVE is more affordable than clustering: Enterprises can choose the lower-cost, highly available, highly reliable Fujitsu PRIMERGY blade servers for use in their physical and virtual environments. The single management view of physical and virtual environments simplifies system administration and reduces the number of errors; the hierarchical system views help pinpoint hardware problems. The software automates SAN reconfiguration when switching over servers, solving a common virtualization recovery complaint. New blades can be added or recovered faster and automatically, increasing hardware availability and service levels while lowering administration costs. RCVE increases ease of backup and recovery for both virtualized and native environments through unified views and storage of three "golden image" versions.

Product ✍ Releases

■ Neptuny Caplan 3.0

Neptuny has announced the release of Caplan 3.0, which is a capacity management program for large data centers and networks. The new version of this program manages the execution of virtualization and consolidation projects, along with the construction of future scenarios to help the collaboration between IT resources and business initiatives. Caplan 3.0 is also designed to decrease overcapacity by establishing the amount of space required, which results in a more cost-effective and greener IT department. Caplan 3.0 can forecast capacity shortages, which decreases the likelihood of problems related to capacity and makes certain that the minimum capacity required to keep the business running is available in the event of an IT failure.

STORAGE

■ Iomega eGo Encrypt & BlackBelt

Two new 2.5-inch USB 2.0 portable hard drives from Iomega address users' concerns about security and data protection. The ruggedized 320GB eGo Encrypt ($149.99) comes with hardware-based 128-bit AES encryption for enterprise-class security. With Iomega's Drop Guard Xtreme technology and a rubber sheath, the Encrypt is designed to survive drops of up to seven feet without data loss. Meanwhile, the eGo BlackBelt 250GB ($119.99) leaves out the encryption and higher capacity to weigh in at a lighter price point.

■ iXsystems FreeNAS Titan

iXsystems has announced FreeNAS Titan, a storage appliance solution that can simultaneously serve data to multiple servers or clients. FreeNAS Titan is a FreeBSD-based NAS server that supports disk encryption, CIFS, FTP, NFS, AFP, RSYNC, iSCSI, S.M.A.R.T., and local-user authentication. Other features include a 2U 12-bay SATA hot-swap chassis, an Intel quad-core CPU, dual Gigabit Ethernet interfaces (up to 10), 2GB DDR2 memory (up to 8GB), a high-performance RAID controller, and support for up to 12TB of storage.

■ Stonefly OptiSAN HD
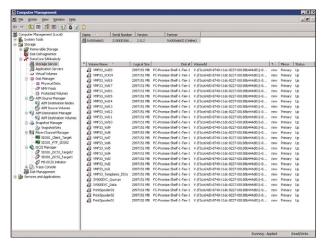
Stonefly has released the OptiSAN HD as part of the OptiSAN Storage Concentrators line. The OptiSAN HD is an IP SAN for IT storage networking. Specifically, the OptiSAN HD supports 128 drives and offers 30 to 40TB of storage space. It's ideal for remote backup but also applies to virtual servers, disk-to-disk backup, and comprehensive disaster recovery. Featuring a 6U configuration, the OptiSAN HD is available with 48 750GB or 1,000GB SATA drives. Additionally, it can house up to 240TB total capacity.

■ Winchester Systems FlashDisk SX

The SX-3400 series of FlashDisk Tiered SAS/SATA RAID disk arrays from Winchester now features support for up to 80TB of hard drive capacity, thanks to drives from Seagate. Likewise, the FlashDisk SX-2300 series will scale up to 60TB. Both systems feature SAS and SATA support, single or dual failover redundancy, and RAID 6 support. Prices start at less than $25,000.

STORAGE

DataCore SANmelody provides best-of-breed storage virtualization

(866) 516-5491

www.fairwayconsulting.com

DataCore Does For Storage What VMware Does For Servers

DataCore SANmelody

Fairway Consulting Group offers services based on best-of-breed virtualization technologies, including storage, server, desktop, application, and disaster recovery. As a channel partner with several virtualization manufacturers, FCG helps companies focus on sustainability, data growth, performance demands, end-of-life hardware, and disaster recovery.

FCG is a Premier Channel Partner with DataCore Software, with products focusing on storage virtualization, management, and monitoring. DataCore SANmelody, SANsymphony, SANmaestro, and Traveller CPR offer a combination of features and functionality to meet the needs of any enterprise.

DataCore SANmelody overcomes the high cost barrier and complexity of traditional SANs by converting x86-based servers (physical or virtual) into fully capable SAN controllers that can virtualize any raw disk and serve them to application servers over iSCSI or Fiber channel.

DataCore is intelligence only, delivering the flexibility that conventional hardware virtualization cannot provide. And with DataCore, you can leverage your existing hardware and add new hardware later on-the-fly, with no interruptions.

DataCore's SAN solution features include:
- Hardware independence
- 65% increased storage utilization on average
- True active/active high availability
- Asynchronous IP Mirroring
- Snapshot (COW or complete image)
- iSCSI and Fiber Channel-ready
- 100% investment protection on upgrades

FCG:
fairway consulting group

OPINIONS
INFO-TECH • INSIGHT

It's The Business, Stupid

Bill Clinton's "It's the economy, stupid," was one of several messages intended to keep his 1992 presidential campaign on track. I've modified this saying and use it to remind myself of what's important in IT.

It's possible to get buried in cool technology, a big project, or the latest support issue and lose sight of why we're really here. IT has often been seen as a supporting cast or an expensive collection of geeks who sit around spending money on stuff that isn't always successful at delivering what the business wants and needs. I find neither of these depictions palatable or apt, particularly for those of us who have made IT our life's work.

While these perceptions are changing, it's important that we continue to improve our understanding of the business to be more able to focus our efforts, participate fully in the management process, and be seen as a strategic capability rather than an expense. During difficult economic conditions, management is forced to consider trimming IT budgets in places we never thought possible or wise. If IT is seen as a strategic partner that can and does bring significant business value to the table, these cuts may be less severe or may even result in IT being invited to help lessen the effect of cuts elsewhere in the organization. To better the position of

IT in the food chain, you need to understand this business animal.

It's important, then, to keep the needs of the business foremost in mind to ensure that IT is integrating with the business consciousness. Here are some ways in which you can weave continuous business learning into your daily regimen.

Learn To Talk The Talk . . .

As you interact with the business, build relationships with stakeholders that will allow you to learn about their roles in the company and any process or technology issues they are experiencing. Spend time trying to understand how others in a

RUSS CONWATH

Russell Conwath is a senior research analyst at Info-Tech Research Group and has spent more than 20 years in IT. Conwath has experience in software and hardware development, systems and software implementation, IT remediation, and senior technology management in a number of industries, as well as in independent technology and business consulting.

similar or comparable industry, with related processes, are being challenged. Investigate best practices and determine if opportunities exist for further improvement in your company.

For better or worse, IT is one function that can come into contact with every ele-

ment of the business; as such, you may be able to glean knowledge from folks in finance, engineering, manufacturing, customer service, logistics, sales, and marketing. Where possible, get to know key decision makers and where they feel their technological and business pain points exist. Where do they go for innovative ideas and best practices information?

Use technology to help in your quest to learn more about the business: blogs, RSS feeds, and Web sites can deliver targeted content on your industry, as well as general business topics. Attend inexpensive industry or functionally focused conferences to gain new insight or learn specific aspects of your business, such as logistics or manufacturing.

. . . & Walk The Walk . . .

Of course, with all this newfound knowledge, you can begin to understand where the business challenges are and see some opportunities for innovation. These may be small improvements using existing toolsets to simplify processes, or they may be significant opportunities introducing new functionality to address very visible business issues. One case in point could be eliminating the need for a given report by linking secondary data into a primary operational system rather than having to generate it from another system. A significant opportunity might be to implement a route management system to more effectively manage new vehicle requirements, improve operational efficiency, and reduce overall fuel costs.

Some companies use customer-facing technology, offering yet another opportunity to use technology in support of the business. It gets a bit trickier here as you have to think like one of your customers. Ideally, a new customer-facing technology should:

• Minimize costs and simplify customer service processes.
• Extend the value chain.
• Increase the cost/pain for customers to switch to a competitor.
• Create a differentiation between your services and those of your competitors.

. . . Without Falling Down

Of course, we still have to make that cool technology work, finish that big project, and deal with that pressing support issue, all while learning about the business, pondering some wondrous new technology-based product or service, and solving world hunger. No, I don't think any of us are expecting to hear the words "spare time" pop up in office conversation anytime soon; however, you need to regularly schedule some time to research and understand the bigger picture.

The business is continually looking for key areas to step up and give more. IT can play a more important role if we can bring innovative, business-focused solutions to the table. So, while your day-to-day tasks may not always provide for the kind of learning and interaction I describe, take advantage of opportunities to gain business knowledge and insight. It will be helpful to the business and the quality of the solutions we craft, as well as your career over the long term.
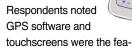
Send your comments to infotech@processor.com

Consumers Happy With Mobile Phones

A new study from JD Power & Associates found that despite a 16% increase in the average purchase price of wireless handsets, as well as an increase in the average cost of wireless service, consumers are more satisfied with their mobile phones in 2008 than they were in 2007. According to Kirk Parsons, senior director of wireless services at JD Power & Associates, "The ability to communicate by sending instant messages and emails, accessing the Internet, and getting directions via GPS are just some of many features that handset owners are growing to utilize, and therefore, devices are meeting their growing expectations."

The JD Power & Associates study found that consumers ages 18 to 24 were happier with their mobile phones, on average, than consumers between the ages of 45 to 64. According to Parsons, "Younger users are more likely to use the new features that today's phones offer, so they are getting more use out of their device." Additionally, the report found that younger consumers are more likely to purchase data plans, text messaging, and downloads. One interesting fact in the study was that nearly half of the wireless users said they were likely to purchase a new phone in the next year.

Respondents noted GPS software and touchscreens were the features they would most like to have on their next mobile phone. Parsons says, "Photo capabilities, the ability to download music, and easy text-messaging tools were also highly-sought-after features." Sony Ericsson had the highest overall satisfaction rating among consumers, primarily because it scored well in the features and battery function scoring. It was the third year in a row that Sony Ericsson was ranked the highest among wireless handsets.

JD Power & Associates also asked consumers what they look for most when shopping for a mobile phone. The most popular answer was "pleasing design," which was followed closely by "received for free," "easy to use," and "reduced price." The average price of a wireless handset in 2008 was $107, and customers indicated that they spent an average of $80 a month (including federal and state taxes) on wireless service.

by Nathan Lake

Backup vs. Archive

Understanding The Difference When It Comes To Email

by Sandra Kay Miller

• • •

IN ITS "E-MAIL Archiving & Management Report 2008," analyst firm CMS Watch found that 80% of mail data is duplicated because enterprises lack a basic understanding between email backup and advanced archiving.

"In order to survive, most enterprises today depend on high volumes of email running efficiently through their system. Virtually all enterprises require that messaging be a part of the underlying IT infrastructure. Many decision-makers describe systems such as Microsoft's Exchange as the single most important communication and business application within their operation," the report states.

That being said, when it comes to backup and archiving, most organizations tend to lump the two into the same category. While in both cases, data streams are passed to tape, disk, or optical storage based upon policies and configurations often using common infrastructure, they are disparate in their fundamental business purposes. This disparity and misunderstanding often results in shortcomings in the backup and/or archiving needs within the organization.

The Main Difference

The most basic tenet to understand between the two is that backups create duplicate replicas of email data, while archiving removes a single instance of the information from a production environment to a storage system conducive for long-term retention.

Email backup covers business continuity, allowing data to be restored in the event of human error or disasters in which data is lost, destroyed, or corrupted. Today, organizations employ a variety of backup solutions that create "snapshots" or traditional backups duplicating information onto removable media. By capturing incremental moments-in-time, it affords the opportunity to delete messages and attached files from one backup to the next.

Enter archiving.

Driven by the multitude of regulatory compliance laws requiring explicit message retention, storage, and discovery for years, message archiving solutions are much more complex than backups. When data is moved from the production to archival environment, it is tagged and indexed with sophisticated metadata to assist contextual searches, also referred to as e-discovery.

Consider being tasked with finding a series of five-year-old emails from former employees for a legal matter. The chances of backup media containing the information would be slim, as most backups are continuously overwritten over a period of weeks or months. Because many organizations choose to store backups offsite, this would also result in an extensive (and expensive) search. Even if the data were to exist on backup, it would need to be returned to the data center and loaded. There would be no active email or user account with proper credentials for rapid restoration, not to mention the email client may be outdated or even obsolete.

In addition to meeting regulatory compliance, Forrester Research suggests archiving as a best practice for ILM as a means to reduce storage costs, improve overall operational performance, and extend access to information for business intelligence.

Stephen Pao, vice president of product management for Barracuda Networks (www.barracudanetworks.com), points out additional pluses. "The benefits of email archiving span well beyond the rules and regulations themselves. While the regulations represent a best practice in terms of email management, customers immediately see concrete operational and usability benefits by implementing an email archiving solution. On the infrastructure side, organizations benefit [from] cost savings by migrating old email from their live email infrastructure utilizing expensive transactional storage to less-expensive archival storage. So, what we see here is a win-win—storage cost savings and faster search times."

Archive Flavors

Once an organization has a firm grasp of the differences, it doesn't take long to realize that both backup and archiving are necessary for organizations of all sizes, especially those bound to compliance laws. While backup technologies have evolved and matured throughout the years, archival technologies present more of a challenge.

To help alleviate confusion, Alan Pelz-Sharpe, CMS Watch principal industry analyst for EAM (enterprise asset management) technologies, divides archiving vendors into two categories: policy-centric and archiving-centric.

According to Pelz-Sharpe, policy-centric vendors deliver superior and sophisticated solutions for email records management. They tend to be at the top tier in terms of cost and complexity, and they are most often deployed in highly regulated environments, such as larger enterprises and government agencies. Their target audiences are the business and legal units responsible for meeting stringent regulations for the multitude of compliance laws.

Similarly, archiving-centric vendors can meet the demands of midsized to large organizations; however, they are designed more for the optimization of archiving systems, rely heavily on policy management, and are positioned toward IT buyers for the operational aspects of mail servers for optimization.

Barracuda's Pao has seen a tremendous demand for message archiving from traditional sales channels and customers, many of whom are in the midmarket, rather than in regulated industries. "The market for email archiving has gone well beyond finance and healthcare into everyday businesses with as few as 50 to 100 employees. Every organization should be able to use it. Organizations from a range of vertical markets recognize that email archiving leads to a more efficient network from an IT standpoint, as well as from an end user's perspective."

From the estimates of research firm IDC that sales of email archiving solutions will increase two-fold over the next three years, from $631 million in 2007 to $1.7 billion by 2011, Pao's statement appears to be on target with future trends. **P**

What Are The Differences?

Backup	Archiving
Operational backup and disaster recovery	Regulatory compliance and legal records retention
Copies messages	Offloads messages
Multiple copies	Single instances
No indices or search capabilities	Indexed for discovery and retrieval
Utilizes storage capacity	Reduces storage capacity
Short retention (days or weeks)	Long retention (years)
IT responsibility	Executive and legal responsibility

Is Your Remote Office Safe From Disaster?

It's Not Too Late To Tweak Your Remote Office Data Management Capabilities

by Carmi Levy
• • •

ENTERPRISES WITH only one office have it easy when they're building a DRP (disaster recovery plan). When everything is in one location, securing mission-critical data assets is a relatively straightforward process. Enterprises with remote offices, however, face additional challenges; many of them are left exposed as a result.

"Protecting data in remote offices has always been tough," says Zeus Kerravala, senior vice president of enterprise and consumer research for Yankee Group. "Most IT departments are really good at backing things up but not so good on the recovery side."

Remote Backup Doesn't Work

Kerravala says that over the years, many different models—such as installing remote backup devices in remote offices—have been tried, but they're often difficult to manage. These sites are often outside IT's direct control, and onsite employees often aren't reliable enough to change and transport backup tapes.

Although some IT departments may consider centralized architecture as a solution, one size doesn't necessarily fit all. Pulling remote servers back into the data center and then centralizing the backup process may

be problematic if the organization lacks sufficient WAN capacity.

Despite the challenges of striking the right balance between maintaining data integrity and supporting remote environment needs, Kerravala says enterprises can't afford to ignore the issue.

"The ROI of not doing anything is pretty big . . . until you have a problem. Then the cost is immeasurable," he warns. "If you lose some sensitive data or you fail to close an IPO as a result, you may be unable to recover." Kerravala says this is a major risk associated with traditional remote office-based tape backup strategies.

Know Your Enterprise's Needs

Roberta J. Witty, research vice president at Gartner, says delivering focused solutions that reduce remote office data exposure should also include greater understanding of onsite enterprise activities.

"You have to understand the business processes that are taking place in a given location," says Witty. "Once you know the mission-critical activities, you can prioritize them. Mission-critical business processes or workflows related to those processes will naturally be prioritized over more routine administrative work."

Witty says this involves risk assessment, asset inventories, resource planning, and

staff capabilities. The resulting 360-degree view, she says, is critical to effective infrastructure planning.

Time For A Paradigm Shift

Kerravala says evolving remote management tools allow centralized IT control over backups on remote servers and client machines. Laptop-toting road warriors, long a challenge for centralized management efforts, benefit from maturing 3G wireless infrastructure. Standardized 3G network adapters allow persistent network connectivity wherever a user sets up shop, a capability that supports greater centralized control over mobile assets.

In other cases, Kerravala recommends implementing policies that require mobile workers to regularly connect their machines to corporate infrastructure for backups and updates.

On the infrastructure side, Kerravala says rapidly maturing WAN optimization tools allow LAN-like performance virtually unheard of just a few years ago.

Go Virtual Or Go Home

The growth of these tools is prompting IT directors to question traditional assumptions about bandwidth. Specifically, more isn't always better.

"Even with the latest WAN and network infrastructure upgrades, you can continually

Out With The Old, In With The New

Most analysts agree that traditional approaches to managing remotely located resources using conventional tape-based backup and restore solutions just don't fly in today's environment. They advocate the following first steps:

1. Ditch the tape units. Systems that rely on untrained users to change tapes are doomed to fail.

2. Look in to centralization. Greater levels of IT control over remote-office data management reduce exposure to human factors and result in improved across-the-board infrastructure management.

3. Don't reach for the stars. Centralization is a worthwhile goal, but limitations in existing infrastructure may necessitate a go-slow approach. Certain applications and data environments, for

example, simply won't tolerate real-time access over the WAN.

4. Tie to your DRP. Improved remote office management drives more effective cross-organizational disaster-recovery plan maturity. Resources already allocated to DRP creation and maintenance can be leveraged for infrastructure improvements that feed into improved remote infrastructure capabilities, as well.

"Companies need to throw in the towel on the old backup and recovery systems and look at newer technologies and alternative strategies where you have centralized computing with distributed end points," says Zeus Kerravala, senior vice president of enterprise and consumer research for Yankee Group. "Today's business environment demands a new way of thinking."

Microsoft Warns Of Worm

Utilizing a Windows vulnerability that Microsoft fixed with an emergency patch in October, a worm is building a massive new botnet that's estimated to comprise about 500,000 computers. Microsoft recently indicated that the worm caused a spike in exploits of a bug in the Windows Server service, a feature that helps to connect Windows network with file and print servers. Trend Micro said that it has spotted infected IP addresses on the networks of ISPs in the United States, China, India, the Middle East, Europe, and Latin America. Therefore, it's imperative that workers apply Microsoft emergency patch MS08-067 as soon as possible.

Nokia Seals Symbian Deal

Nokia has announced that its acquisition of Symbian is complete. Even though Nokia already owned 48% of Symbian, in June the company announced that it would spend $410 million purchasing the remainder of shares for the mobile operating system. The Symbian platform accounts for about 60% of the market, making it the most widely used mobile operating system in the world.

Rumors Of Buyout Give Yahoo! Shares A Boost

Even though Yahoo! recently lost its CEO, Jerry Yang, the company's shares increased by 7% earlier this month, according to a report by *The Wall Street Journal*. The upward nudge may be related to rumors of a potential buyout offer: The report says Jonathan Miller, a former AOL executive and current partner at venture capital firm Velocity Interactive Group, has been quietly raising between $28 billion and $30 billion to purchase Yahoo!, which amounts to about $20 and $22 per share. Several sources have said, however, that the purchase is still quite unlikely.

Server Sales Hurting Across The Board

Although shipments for Q3 rose by 4.4% in 2008, global server revenue has decreased by about 5.4%, or $12.7 billion, according to a Gartner study. HP was the top seller over IBM, Dell, Fujitsu, and Sun Microsystems, moving 742,000 units—an increase of about 11% compared to numbers in 2007, which the company attributes in part to the success of its ProLiant brands. Dell came in second,

2.1% behind HP. Both IBM's and Fujitsu's server shipments fell more than 3%, while Dell and Sun shipments grew by 3.3% and 2.9%, respectively.

Microsoft Takes Aim At Counterfeit Software Sellers

Sixty-three lawsuits filed in a dozen countries are the result of Microsoft's strategy to crack down on pirated copies of Windows XP and Microsoft Office. Bogus auctioneers were pirating a so-called "Blue Edition" of Microsoft products, which they claimed was a special edition resulting from Microsoft surpluses, on popular sites such as Craigslist, eBay, and PriceGrabber. Microsoft has closed down hundreds of auctions after attentive Microsoft customers sent complaints to the corporation or posted grievances on the online auction sites. To combat piracy, Microsoft implements many reporting sites and programs, including the controversial Windows Genuine Advantage program.

Protecting Portable Storage Devices

Keep Tabs On Your Data

by Robyn Weisman

• • •

FOR MOST PEOPLE, portable storage devices—be they a thumb drive dropped in a pocket or a smartphone that provides Exchange access along with restaurant reviews—rank at the top of technologies that have improved their lives. But they can be a curse to IT managers because employees often access enterprise data, only to lose it or have it stolen.

"The further you get from the server, the less actual control you have over [data]," says Gary Streuter, vice president of marketing at storage solutions provider CMS Products (www.cmsproducts.com). "You can lock up the servers, but client-side machines sitting out in an office are harder" to monitor, which means an employee might easily download something from his office computer to a USB key without your being the wiser—unless, of course, you keep some of these tips in mind.

Encryption Is A Must

According to Streuter, organizations are increasingly moving toward encryption as a way to keep mission-critical data out of the wrong hands. "Let's assume you're an accountant, and you've decided to work out of the house tomorrow, so you take a thumb drive and you download the payroll files on it. It falls out of your purse," Streuter says. Whoever finds the thumb drive could conceivably retrieve employee Social Security numbers and

bank accounts for automatic deposits, among other things.

Encrypted data requires a password to unlock that drive. And while passwords can vary in strength, most would-be thieves tend to go for low-hanging fruit, so chances are the person who finds an encrypted drive will ignore it or toss it out.

Leverage Your Security

Sean Martin, vice president of marketing at endpoint security solutions provider SkyRecon (www.skyrecon.com), points out that you should remember to leverage what you do from a systems protection perspective together with protecting portable storage devices from data theft and loss.

In other words, use the antivirus protection, host intrusion protection, and related technologies you have in place to make sure your information is also shielded from attack and compromise from malware and other threats. "Malware on the device could be another entry point just like floppy drives of years ago," says Martin. "You want to protect your environment from attack through the device."

Associate Devices With Specific Users

Martin says associating a portable storage device with a specific user helps to guard against threats, particularly ones from inside the company. For example, only the financial officer can use his own serial-numbered USB drive on his machine. "This effectively means the officer can't go to a different machine and steal data if he wanted to. This locks the device to person and machine, ensuring his data is used by him on these devices," says Martin.

This strategy also prevents someone from taking her storage device and plugging it into another machine or logging into her PC as a guest to get around the system, which helps stave off any insider theft of data, says Martin.

By using the serial numbers and vendor ID numbers of portable storage devices, a good third-party security solution will allow you to dictate which numbers can be used to access your network, says Nick Cavalancia, vice president of Windows management at Windows network management solution provider ScriptLogic (www.scriptlogic.com). "This restricts employees from bringing in a rogue portable storage device to download data," Cavalancia says.

Consider Third-Party Software

Cavalancia points out that Microsoft Windows' built-in Group Policy controls provide a blanket all-or-nothing lockout on USB storage; however, these controls may not be sufficiently granular for many organizations, which might want to allow a CFO greater access to files than a payroll clerk.

Third-party software can provide you with "the power to set policies allowing some users to have read-only access on available devices, completely allow or deny access for others, and enforce device lockdown for both local and remote users," says Cavalancia. "Businesses can look for software solutions that can lock USB ports or have permissions and policies in place that can control who can have access to which files, where, and when."

Track Data Leaving Your Network

CMS Products' Streuter recommends having some type of data-tracking application that can tell you the parameters of a given file, including its name, size, the time it was downloaded, and who was logged onto the computer when it was downloaded.

For his part, Cavalancia says that because breaches will happen despite anyone's best efforts, data-tracking applications should also have reporting and alert capabilities, so that you can locate any individual who has inappropriately downloaded information. "Central reports will also allow administrators to see all attempts at restricted activities, [and forewarn] users with desktop alerts that they are performing a restricted operation, such as connecting an unauthorized USB stick, iPod, laptop, or PDA," says Cavalancia. P

Podslurping & Bluesnarfing: The Latest Threats To Enterprise Data

You've known for years that you need to protect your network from phishing, pharming, and spam, but have you been protecting your data from podslurping and bluesnarfing?

Nick Cavalancia, vice president of Windows management at ScriptLogic (www.scriptlogic.com), says both methods have become more common in the enterprise in recent months.

Podslurping describes a corporate employee placing important data on her iPod or MP3

device and then leaving the company with the stolen data. Although the term is fairly new, the method itself has been around for some time.

More worrying to your enterprise network is bluesnarfing. "Bluesnarfing is the theft of information from a wireless device through a Bluetooth connection, often between phones, desktops, laptops, and PDAs," says Cavalancia. "Bluesnarfing also captures calendar invites, contact lists, and emails, all of which have the potential to hold highly confidential and sensitive data."

Is Your Remote Office Safe From Disaster?

add bandwidth and still end up with network conditions that can limit your applications' performance," says Michael Cucchi, senior director of product marketing for Expand Networks (www.expand.com). "Even if you have a huge pipe, you'll still deal with latency, congestion, and other performance obstacles.

"We've seen customers add bandwidth to an environment but not be able to use it due to these factors," adds Cucchi. "[More] bandwidth is not really the true solution." Making better use of that bandwidth, however, is.

Cucchi says WAN optimization solutions that use byte-level caching can

reduce traffic loads without compromising application performance. Even more advanced technologies facilitate a holistic approach to WAN management that gives IT managers a clear view of how their network is being used.

"There are certain services that you want in a branch office, but you need to deploy them in a manageable, coherent, intelligent, and efficient process that's also secure," says Cucchi. "But you can't simply replicate data out to the edge. Your solution has to be fully integrated with Microsoft Domain Security and your full suite of management tools.

"You can't just do file services. You need DNS, DHCP, and print services,

because print jobs place huge loads on the WAN. Virtual services offerings that integrate all this intelligence into one device let you make the most cost-effective use of your pipe. This increased visibility lets you decide more precisely if and when you need to scale it up." P

What About Virtualization?

The rapid growth of virtualized servers and services is making remote office management significantly easier. Hardware- and OS-independent virtualized environments allow rapid deployment of WAN optimization solutions. Whereas traditional, nonvirtualized environments may have required a physical box to be installed onsite, virtual solutions can be rolled out and managed remotely.

Determine If Blades Are Right For Your Enterprise

Understanding Basic Server Technology Is Ideal

by Curt Harler

• • •

BEFORE YOU COMMIT your IT operation to the cutting-edge technology that is blade servers, it's best to sharpen your planning skills. Yes, blade servers are state of the art in server technology, but they aren't the answer to every SME's server needs.

Blades get rave reviews from many IT departments because they have smaller footprints in the cabinet, they consume less power compared to standard servers, and they cost less overall to manage.

"Blade servers in general are the fastest-growing server type, due to the economic benefits of blades in comparison to traditional server categories," says Steve Gillaspy, group manager, HP BladeSystem.

Assess Cost Benefits

SMEs should expect to spend between $20,000 and $30,000 on a blade system that contains three to eight server and storage blades in addition to networking switches. "On average, blade servers cost 20 to 35% less than equivalent rack and tower servers," Gillaspy says.

An SME that only owns one or two servers at any one site likely will not experience the economic benefit of migrating to blades from rack and tower servers, Gillaspy explains. "Other than this scenario, blades have the same server, networking, and storage features of traditional rack and tower servers, with additional cost, time, change, and energy benefits," he says.

Specifically, Gillaspy says blade systems use 20 to 30% less power and cooling,

TOP TIPS

- Blades are beneficial because they are more dense than rack servers and save SMEs considerable space

- Blade systems require 20 to 30% less power and cooling, reducing the overall costs of operating a data center

- These servers are also more efficient and support multiple operating systems

which also helps to lower overall data center costs.

"We recommend investing in those specific technologies that make sense for a company's particular need and environment," says Kevin Gruneisen, Logicalis (us.logicalis.com) technologist. "We believe that investment protection is a key benefit to blades. There is longevity and openness in the architecture with a variety of processor types and many supported operating systems," he says.

Jim Ganthier, HP director of marketing for blade servers, says the blade architecture was developed with four points in mind: saving time, cutting costs, reducing energy consumption, and simplifying change-out.

"It took too long between the time a [traditional] server arrived at the loading dock and the time that server started working and making you money," Ganthier says. He was referring to the long path a server administrator had to follow before getting anything changed: a session with the network administrator, a session with the SAN admin, and then a sit-down meeting with the facilities person to hash out wiring and access.

"With blade servers and virtual connection, you can lower cabling costs by about 90%," Ganthier says. "We were able to crush the time to implementation from months to days or weeks."

Most SMEs with industry-standard server knowledge and experience already have a majority of the skills necessary to start implementing blade systems. "There is a small learning curve associated with setting up and managing blade enclosures," Gillaspy says.

Blades are easy to install. Ganthier explains it is a simple process of opening a latch, unclicking the port, inserting the blade, and closing the latch. The enclosure becomes the node point.

Startup Costs

At the outset, customers need to invest in a blade enclosure and its internal components, including any combination of server blades, storage, software, management tools, interconnects, and power and cooling solutions.

Among the tools Gruneisen would include when shopping are blade management software, storage, configuration tools, systems management, remote management, and a KVM (keyboard/video/mouse) switch.

Implementing blade server technology brings initial hardware and software costs, coupled with administration costs, which you can acquire from in-house staff or through a managed services model.

In addition, there are online and instructor-based technical training courses. Gillaspy explains that HP recommends customers

Key Points

Blade servers will benefit most any SME, but they aren't for every company. Familiarize yourself with blade servers and know what costs are involved before making a purchase. A blade system with as many as eight server and storage blades can cost as much as $30,000. Companies with three or more servers are more likely to profit from using blade servers.

work closely with a certified channel partner, as these partners can help them learn, order, and implement their systems.

When considering blade servers, Gruneisen advises focusing on a strategy that is best for your organization. "Get your complete IT staff together to evaluate the blade solution," he advises. This avoids the situation where an SME might focus solely on the server end of the chassis and not truly realize the benefits to

cool. Blade server population is very dense in a server rack, and the common wisdom is that heating can be a challenge. Not so, say the vendors.

"It is a myth that blade servers require more power and cooling than traditional rack and tower servers," explains Gillaspy. In fact, he says one reason customers migrate to blades is to save on power and cooling costs and to simplify their entire IT solution.

Gruneisen is in agreement with these findings, saying, "We have not found cooling to be an issue."

Gruneisen also says blades are often a part of consolidation and virtualization strategies. Virtualization, in turn, can have a positive impact on the environment. For instance, Logicalis developed a Green IT Calculator (www.us.logicalis.com/green-IT) that helps organizations see the effects of virtualization in any SME environment.

Other Considerations

Blades might not be the ideal option, either technologically or financially, for every SME's situation.

"Blades do a nice job in most instances, but sizing is always going to be a key part of the evaluation," Gruneisen says. He recommends meeting with a vendor or solution provider who specializes in this area to determine when such a setup is the right fit for your company.

Gruneisen recommends SMEs do their homework. "A good understanding of basic server technology will help as SMEs become more familiar with blade technology: CPU, memory, storage, HBA [host bus adapter], networking, Ethernet, fiber, booting from SAN [storage area networks], power basics, and so forth," he says.

"Do consider how storage—disk and tape—will be acclimated to this solution," Gruneisen says.

> **Most SMEs . . . already have a majority of the skills necessary to start implementing blade systems.**

be had at the back end where all the switch technology goes on.

"This can be the secret sauce for truly looking at how you consolidate your data center," Gruneisen says. "Take a strategic look at current and long-term plans to determine if 'scale up' or 'scale out' better fits your needs. Take a look at your overall IT strategy to determine how blades play within it."

Keep It Cool

Many IT directors say one of the big concerns with blade servers is keeping them

"In general," Gillaspy says, "blades cost less than traditional rack and tower servers, use less power and cooling, and are easier to manage. Customers that own more than three servers in a site would greatly benefit from migrating to blades over time."

His advice to get a good blade system up and running is to work with a knowledgeable and certified channel partner. "Certified partners have the most experience with working alongside customers to set up systems and can help ensure a smooth transition to a bladed infrastructure," Gillaspy concludes. P

SIX QUICK TIPS

Boost Your SME's Hard Drive Knowledge

Tips To Help Your Data Center Stave Off Hard Drive Failure & Protect Your Data

by James Cope

• • •

HARD DRIVES USED in data center equipment run all the time, day and night, up to 8,760 hours a year, compared to half that for office machines. If you're lucky, the enterprise drives in your SME won't slow down too much or fail before their time.

Nick Kostoff, senior enterprise hard drive engineer at HP (www.hp.com) in Palo Alto, Calif., infers that SMEs would do well to manage their expectations. He says, "There are two rules of hard drives: 1) Hard drives fail; 2) Engineers can't change rule No. 1."

While Kostoff says his rules come from observation and not a formal study, there is likely more truth to what he concludes than not. Even so, there are things you can learn and do to stave off hard drive failures and avoid losing data from servers as they power your business.

Don't Buy Cheap Hard Drives

If you believe that the hard drives you add to an office desktop are the same as the ones you should be running in the data center, you'd be wrong. Opened up and side-by-side, two SATA hard drives may look the same, but the enterprise drive is built to sustain 24/7 data center performance, and the desktop drive is not, notes Tom McDorman, general manager of enterprise storage solutions products at Western Digital (www.wdc.com) in Lake Forest, Calif.

Enterprise drives are a beehive of electro-mechanical activity, especially those in constant use such as the ones in email servers. An electrical current is intermittently applied to the heads during read and write cycles as those heads move back and forth across the disks day in and day out. No surprise that building drive heads to withstand constant electrical and mechanical stress of the job adds cost—$10 or $15 more per drive compared to the heads on a desktop drive, McDorman says. Because the disks for the enterprise drives are especially graded and selected for absence of surface defects, they cost more, too—as much $12 more per drive.

Keep Bad Vibrations At Bay

Vibration is not confined to the hard drive itself; it also can be induced by external sources in the data center, leading Lee Johns, director of marketing for entry storage and storage blades at HP, to say, "If servers are not in a purpose-built data center, there's a problem."

Even the racks housing servers can pick up and transmit vibrations that affect drive longevity and performance, McDorman notes. He has seen instances where a rack manufacturer decreased the gauge of steel in its racks of the same model, resulting in vibrations that led to premature disk failure. How a rack is constructed affects vibration, too. He further points out that some racks are welded, and others are fastened together with rivets or screws. Rack components secured with flat-head screws seem to flex instead of loosen as racks are moved around, whereas those held together with rivets can be more susceptible to vibrations because rivets can work loose.

Handle Hard Drives With Care

HP's Kostoff says hard drives are delicate instruments. A physical jolt from dropping the hard drive on a workbench or another kind of jolt from unconditioned electrical power can damage it. McDorman at Western Digital suggests employing hard drives with a "ramp load" feature. The head rests on a ramp to the side of the disk, and as the disk spins up, the head slides up the ramp over the disk; when the disk spins down, the head slides down the ramp and is parked away from the disk surface. The process prevents the head from banging down and inflicting a wound on the surface of the disk.

Future Look: No Moving Parts

The military has been using solid-state drives for years, says Jieming Zhu, a distinguished technologist at HP who focuses on solid-state disk technology. But it's tough to predict when you will begin seeing solid-state drives in the enterprise. The drives are rugged because there are no moving parts. And they don't have motors, so power requirements are lower than for the electromechanical devices that are the mainstay today. Solid-state drives, which can attain 10 to 50 times the read and write speeds of regular hard drives, are based on the flash memory technologies used in thumb drives and other solid-state consumer memory technologies. On the downside, devices based on single-cell flash memory wear out after 10,000 read/write cycles, and those employing multiple-cell end their useful lives after 100,000 cycles, Zhu says.

Zhu says the next major step in solid-state storage may be the memristor, a resistor that can retain large amounts of data, is fast, and uses very little energy. **P**

> **If you believe that the hard drives you add to an office desktop are the same as the ones you should be running in the data center, you'd be wrong.**

BONUS TIPS

■ **Maintain your cool.** The reason data center hard drives need good cooling is because they can get very hot. According to Nick Kostoff, senior enterprise hard drive engineer at HP (www.hp.com), "The hotter they are, the more likely you are to go down into an earlier failure path." In addition to monitoring temperatures, Kostoff believes electrical power conditioning and controlling dust are essential. He says, "Environmental issues may be among the most significant issues to hard drive failures."

■ **Avoid the wobbles.** Different kinds of motors affect drive reliability. You'll get higher reliability and performance precision out of tied shaft motors than with rotating shaft motors. Tom McDorman, general manager of enterprise storage solutions products at Western Digital (www.wdc.com), says a tied shaft motor is where the shaft is held fast, and the disks rotate around the shaft on fluid bearings. In a rotating shaft motor, the shaft rotates along with the disk, which can induce wobble as disks are stacked on the shaft.

WHAT'S HAPPENING

A Helping Hand

ServiceKey Tech Support Services Enable Customers To Focus On Other Tasks

by Holly Dolezalek

• • •

WITHOUT CAREFULLY trained technical support, the complicated products in the midrange market—servers, routers, firewalls, storage systems—would eventually overwhelm the expertise of their users in some way. But sometimes the manufacturers of those products, and other companies in the midrange market, would prefer to focus on making them and selling them rather than on fielding the occasional 911 technical support call. That's the space where ServiceKey Technical Support Services plays best.

ServiceKey (www.servicekeytss.com) is an independent service maintenance organization that provides technical support for servers, networking equipment, storage equipment, and a lot of other midrange products. It does so through a contract with its partner company, such as an OEM, a software provider, a reseller, or a leasing company. ServiceKey provides hardware maintenance, infrastructure monitoring, backup, security, data recovery, and other functions for those end users. The service is often branded as the partner company's service, so users call in and never know that they're actually talking to someone from ServiceKey.

Answering Calls For Help

Founded in 2003, ServiceKey is currently handling end-user support for about 80 partner companies. This means that 24 hours a day, seven days a week, it's supporting upward of 50,000 pieces of equipment across North America, which is its principal footprint, although some of its partners have an international presence.

The company's partners are a mix of manufacturers, integrators, and value-added resellers whose end users get technical support from ServiceKey.

Calls for help come into ServiceKey's U.S. help desk, which is distributed but has a central hub in Atlanta. That's where most of ServiceKey's TAMs (technical account managers) are based, and those TAMs specialize in different types of equipment. "We match the skill set and the certifications that they hold with the problem that comes through the door," says Angela Vines, vice president of partner services for ServiceKey. "The end user[s] might have a lot of equipment with several different manufacturers, but if they're calling about a Cisco product, they get routed to a TAM who has that certification and owns the call from inception to closure." The company has about 60 employees, but it also uses the services of thousands of certified field technicians.

Vines says that ServiceKey has avoided the escalation path model and routes calls so that they go to a manager who can diagnose and resolve the problem without having to pass it on to someone else. They also follow up with the end user to make sure that everything was resolved appropriately.

ServiceKey's partner customers are companies with less than $1 million in revenue on up to those with more than $100 million. That's part of the company's model; Vines says that ServiceKey can plug just about any opportunity into its infrastructure and doesn't care how big or small a potential partner is. "You never know who your champion is going to be, so you fish with a net, not a pole," Vines says, quoting a former boss of hers. "We want them all."

The MSP Model

ServiceKey is aiming to fish in deeper waters to grow its business, and one way it's doing so is via a new aggressiveness with its MSP (managed service provider) business. ServiceKey is packaging its data recovery and protection service with other offerings to create an offering in the software-as-a-service model, and the plan is to encourage ServiceKey partners to move into the authorized MSP business with ServiceKey's help.

"Some of our partners haven't gone after a lot of residual revenue, and we've made investments in our infrastructure so that we can go to those partners and offer this service as a way for them to go to their user base and add revenue by adding these services to the ones they already offer," Vines says.

For example, ServiceKey offers a site for secure data backup as part of a potential end-user company's recovery plan, which it manages on the back end and offers access to by way of a subscription or usage fee. Its total infrastructure monitoring offering includes hosted sites and a hub where the user's network can be monitored and reported on, and users pay their subscription fees based on how many devices they want to keep an eye on. "It's a way for our partners to offer these services without having to invest in the infrastructure or the software," Vines says.

Friendly, Knowledgeable Service

Vines explains that ServiceKey's biggest value proposition is the expertise of its TAMs. But it's not just technical expertise that ServiceKey emphasizes; the TAMs' customer service and people skills have to be on track, as well. "We could hire the most certified [people] on the planet and we'd still make sure that they were trained in how to handle customers and how to resolve calls the way ServiceKey wants them to," Vines says.

To keep that emphasis on technical expertise and customer satisfaction, ServiceKey does a customer satisfaction survey for every call it completes for an end user. (That's also a service the company provides to any of its partners that are ISO-certified and need to document their follow-up calls to maintain ISO certification.) The survey asks users to express their satisfaction (or lack thereof) on a scale of 1 to 5, and anything that is rated below a 3 initiates a corrective action report, or CAR. "In the six years we've been doing business, we haven't had a single CAR," Vines says.

ServiceKey also offers incentives to encourage TAMs to resolve problems and please the end user: The company keeps statistics on call resolution and customer satisfaction scores for each TAM, and the TAMs have to have scores of 95 to 100% in order to get the part of their salaries that is tied to performance in those areas.

That training concern is a subset of one of the company's biggest overall challenges: keeping up with the market. New builds, new versions, and new products come out all the time in the midrange market, and Vines explains that ServiceKey has to stay on the cutting edge of those offerings so that it can keep coming up with new and expanded services to offer to its partners.

"For us, it always goes back to customization and accommodating the end user," Vines says. "We're always thinking about what our partners need in order to do their business and how they can plug into our infrastructure to help their customers to minimize downtime and maximize uptime." P

THREE QUESTIONS

Putting The Freeze On Data Center Energy Costs

Simplex Isolation Systems Offers Lineup Of Airflow Isolation Products

by Joseph Pasquini

Data center managers instinctively appreciate the importance of maintaining proper air quality and temperature control in any raised-floor setting. Concerns over the volatile energy costs only serve to amplify the concerns.

To help enterprises address these challenges, Simplex Isolation Systems (800/854-7951; www.simplexstripdoors.com) produces a complete lineup of custom enclosures and airflow isolation products for use in the data center or any similar location housing sensitive electronics.

Duane McKinnon is president of the Fontana, Calif.,-based company. McKinnon has been with Simplex since its founding in 1979 and has more than 20 years of experience in the energy-saving industry.

■ **What are the biggest IT-related issues facing today's small to midsized enterprise?**

According to McKinnon, excessive heat and the subsequent energy costs associated with cooling servers and similar equipment are tangible problems for data center managers.

McKinnon explains, however, that the dilemma can be mitigated by dividing the data center into zones specifically designed to isolate heat-producing hardware and maximize their effective cooling. "Hot aisle/cold aisle isolation, in which the rows of computer racks are aligned front-to-front and back-to-back, is considered the best practice," says McKinnon. "Cooled air is pumped into the cold aisles, usually through vents in the raised floor, and directed through the computer racks to cool the computers. The warm air exits the rear of the rack and into the warm air aisle, where it is vented out of the room. This formation keeps the exhaust of one row of computer racks from heating another. These barriers keep the warm air from mixing with and diluting the cold air, thus maintaining the integrity of the cold air and making the overall process considerably more effective."

In addition, continues McKinnon, vinyl curtains and strip doors can be leveraged to enhance the effectiveness of hot aisle/cold aisle isolation.

■ **What should *Processor* readers know about your company's products?**

"Simplex designs and manufactures an entire line of isolation control products, from strip doors to wall panels to ultra-clean enclosures," says McKinnon.

Simplex's softwall curtains and strip doors feature several patented mounting systems. The company's T-bar mounting system incorporates a clip design aimed at eliminating the need to drill or otherwise alter a data center ceiling when mounting curtains. Additionally, bi-folding curtains and mountings allow data center staff to more readily perform routine maintenance on zoned equipment.

Simplex also markets solutions for data center environments wanting a bit more polished appearance. "Several data center managers have come to Simplex with projects in which their data center is in a high-traffic area and is frequently visited by VIPs and clients," says McKinnon. "Simplex also offers hardwall enclosures combining extruded aluminum framing and transparent Plexiglas partitions. These systems include partitions above the racks reaching to the ceiling and sealed doors providing easy and quick access between aisles in the data center."

■ **What makes your company unique?**

"Simplex offers significant advantages," responds McKinnon, who says that his company utilizes specially formulated vinyls that feature low-outgassing and static-dissipative characteristics. "These vinyls also meet the requirements of the California State Fire Marshall, ASTM, and the NFPA fire retardancy requirements," says McKinnon. "We have been told by several clients that our fire certifications were the deciding factor to use our products."

McKinnon also contends that Simplex provides a comprehensive approach to controlling temperatures and optimizing isolation zones in both new and existing data centers. "Simplex offers products, solutions, and design expertise," says McKinnon. "We understand isolation, and we are also experts in the dynamics of airflow, important considerations for keeping a data center cool."